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[*Held in EDINBURGH, JULY 29th, 30th, and 31st, 1858.*]

THE PROPORTIONS OF THE HUMAN FIGURE.*

By GEORGE MURRAY HUMPHRY, Esq., Surgeon to the Addenbrooke's Hospital, Cambridge.

[THE following is an abstract of the communication made by Mr. Humphry.]

The proportions of the figure have formed a subject of study from very early times. The Egyptians and Greeks took the foot as their standard. The former made the frame six times the length of the foot; and the latter, with greater accuracy and better taste, made it seven. The Greeks took the head, also, as a standard, and made the height of the figure eight times that of the head; in some instances nine. The columns in the various styles of architecture were regulated in a similar manner; and the Corinthian pillar has nearly the proportions of the human figure. Considering the capital as the head, the Corinthian pillar is 8½ heads.

Carus (*Die Proportionslehre der Menschlichen Gestalt*) proposes to take the third of the spine as the "module" or standard of the figure; and finds that the height of the whole body is nine and a half such modules; that the length and height of the skull are each one module, the arm and the forearm are three, the hand one, the thigh two and a half, the leg two, and the foot, from the ankle to the tip of the toes, one. The symphysis pubis is the middle of the frame; and the measurement of the extended arms equals that from the sole to the crown.

The human frame differs from that of the monkey:—1. In the great proportionate size of the brain-case. 2. In the small proportionate size of the face, which is situated beneath the cranium, instead of being protruded in front of it. This position of the face gives the eye command over the lower, as well as over the upper limbs, and has reference to the fact that the mouth is not used as an organ of prehension. 3. In the transverse diameter of the chest and pelvis exceeding the antero-posterior diameter. 4. In the great proportionate size of the lower extremities, and the small proportionate size of the upper extremities. 5. In the great proportionate length of the proximal segments of both upper and lower extremities; the hand and foot being comparatively short and compact; and the forearm and leg being short, in relation to the arm and thigh.

The inferior races of mankind exhibit proportions, in many respects, intermediate between the European and the monkey. The brain-case is smaller; the face is larger and more protruding; the transverse and antero-posterior diameters of the chest and trunk are more nearly equal; the lower extremities are comparatively small; the distal segments of both upper and lower extremities are comparatively long; and the foot is flat and sprawling.

As a general rule, in the different races of mankind, the size and good formation of the frame bear a relation to the size and good formation of the brain, and to the strength and vigour of the mind; the fine and well developed frame being the natural associate of the powerful intellect. Hence the nations which are endued with mental superiority possess also the physical qualities for maintaining the ascendancy over their fellow-men; and there is no fear that civilisation and the cultivation of the mental powers will detract from the perfection of the body, provided due attention be paid to sanitary laws.

In the progress of development and growth, the human frame, in some respects, passes through phases of similarity to the Quadrumanous and to the Negro type, on its way to the European or perfect standard. Thus, the transverse diameter, both of the trunk and pelvis, is at first less than the antero-posterior diameter, and does not attain its proper relative proportion till after puberty; in the early periods, the lower extremities are smaller than the upper, and the distal segments of both extremities exceed the proximal.

But the fœtal cranium is, proportionately, large; and it is remarkable that, as the vigour of the mind increases, the size of the cranium and brain decreases in proportion to that of the rest of the body. The explanation of this apparent anomaly is afforded by the fact that the brain is inclosed in an unyielding case, which possesses little power of growth; it is, therefore, made large at an early period, before the bones of the skull are consolidated. After the sutures of the skull are formed, the brain increases in density and depth of convolutions, but does not undergo much increase in size.

"Rickety" persons usually present more or less of the infantile type; the cranium being large; the limbs small, especially the lower limbs; and the arms and thighs being often remarkably short; while the hands and feet attain nearly their proper size.

In true "dwarfs" (that is, persons of small stature, but not of stunted growth), we do not find the infantile type persistent; on the contrary, the limbs are rather long, and the proximal segments rather exceed their proper proportions. In "giants", on the contrary, the extremities are shorter, in relation to the stature, than in the well formed figure; and the proximal segments have not attained their proper proportion to the distal parts, the arms and thighs being short.

In woman, the brain-case is large, the face small, the extremities short, the transverse diameter of the chest small, that of the pelvis large.

* For measurements, and further information on this subject, see "Treatise on the Human Skeleton". By G. M. Humphry. Cambridge: 1858.

Illustrations OF HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

ST. MARY'S HOSPITAL.

PROLAPSUS ANI: OPERATION.

Under the care of S. LANE, Esq.

ANN B., aged 33, was admitted on June 10th, under the care of Mr. Lane. Her history was that, about three months previously, she had suffered from strangury after a blister, and that the violent expulsive efforts which she made, in the constant desire to make water, first caused the protrusion. The bowel used at first to recede in the intervals of these expulsive efforts; but soon became permanently prolapsed. On examination, a portion of the bowel, about four inches in length, was found protruding; it was of a very dark colour; and an ulcerated patch, about an inch in diameter, was seen on the right side. The sphincter ani was in a state of complete atony, and was dilated to the extent of an inch. On the bowel being replaced, by the aid of a sponge, it immediately protruded again. As it was feared that sloughing of the prolapsed part would occur, it was considered advisable to have recourse to an operation, which was accordingly performed on June 16th.

The bowels having been previously cleared out by an injection, and the patient put under the influence of chloroform, the following operation was performed. The bowel was allowed to protrude. Two elliptical incisions, each about two inches in length, were then made. About half the extent of these incisions was in the mucous membrane of the rectum, and the other in the integument surrounding the anus. The skin and mucous membrane between these incisions was removed, and the exposed surfaces brought into contact by means of sutures. This being done, a long-handled needle, threaded with double silk, having attached at the end a piece of sheet-lead as large as a sixpence, was introduced, guided by the finger about four inches up the rectum, carried through the walls of that intestine, and brought out externally at a point just internal to the tuberosity of the ischium. The ends of the silk were then passed through two holes in a piece of lead, similar to that introduced internally, and rather firmly tied. This being done on either side, the operation was completed. A full dose of laudanum was then given.

She suffered a good deal from pain and feverishness after the operation, which was treated by the administration of saline medicine with small doses of opium. A purgative was ordered on the fifth day after the operation.

June 30th. She complained of a little diarrhœa and some pain in the bowel.

Next day, these symptoms increased, and she had a very sharp attack of diarrhœa, lasting about three days.

July 3rd. This was succeeded by pain in the abdomen of a darting character, worse at each inspiration and movement of the body, with weak pulse and furred tongue. She was now extremely weak from the diarrhœa.

July 4th. The abdomen began to increase in size, and she complained of very severe pain in it. The treatment consisted in the administration of opium and antispasmodics, with leeches to the abdomen. After the application of twenty leeches, the pain was much diminished.

July 7th. She had lost the pain to a great extent, but the diarrhœa recurred from time to time, checked however by full doses of compound chalk powder with opium. She still, however, continued to complain of some amount of pain in the abdomen.

July 12th. The pain again increased, accompanied by increased swelling of the abdomen. The bowels also were constantly irritable, so that it was necessary to give constant doses of opium and astringents. Leeches and turpentine stupes were applied to the belly, but no permanent improvement was obtained till a course of mercury was ordered.

July 15. Two grains and a half of calomel were prescribed three times a day, with half a grain of acetate of morphia at night. She was now in a very feeble condition, and believed herself sinking. She was troubled occasionally with vomiting, during which the bowel would protrude somewhat; and passed some blood with her motions. In eight days, however, the effect of the mercurial began to be seen in soreness of the mouth and gums, and from this time her improvement may be dated.

July 24. It is noted that there is no pain in the head, no diarrhœa, and the pain in the abdomen has disappeared; leaving, however, a feeling of soreness when she moved.

It should have been before noticed that the superficial sutures, and the pieces of sheet-lead securing the deep sutures externally, were removed three days after the operation. The wounds united. The portions of sheet-lead in the rectum, to which the deep sutures remained attached, were a long time in coming away from the bowel. One of them was passed ten days after the removal of the superficial sutures; the other remained three weeks in the bowel.

After the attack of peritonitis had been finally subdued, her daily symptoms are no longer noticed in the case-book. She went out of the hospital somewhat more than a fortnight ago, very greatly improved. A small prolapse of the rectum still occurs when the bowels are very much relaxed, or when she strains; but otherwise she is quite well, and is enabled to walk about without discomfort, which previously she was, of course, quite unable to do.

REMARKS. We have given the notes of this case as being an extreme example of the distressing malady to which it refers, and as showing what serious consequences may sometimes follow the operation necessary to relieve it. This operation was somewhat more complicated in this than in the common cases, in consequence of the complicated nature of the affection. There could be little doubt that the presence of the lead shields in the rectum was the exciting cause of the diarrhœa, and perhaps of the peritonitis connected with it. Still the operation appeared to be in the end successful; and any risk was worth running in order to deliver the patient from so lamentable a condition.

ST. GEORGE'S HOSPITAL.

I. FRACTURE OF THE BASE OF THE SKULL.

Under the care of T. TATUM, Esq.

WILLIAM C., aged 30, a man of intemperate habits, was admitted on August 24th, under the care of Mr. Tatum. Immediately before his admission, he had fallen down a height of twelve feet. On admission, he was sensible; but it was said that he had lost consciousness for a short time after the accident. There was a small scalp-wound, of about the size of a sixpence, over the right frontal sinus, exposing the bone, which was contused. There was also a comminuted fracture of the patella, one of the lines being transverse, and separating the bone into two parts, with an interval of about an inch between them. A few hours afterwards, considerable swelling of both eyelids, and especially the right, came on. He passed a quiet night, but next day was rather feverish, and seemed stupid, so that it was necessary to call loudly before he would answer. He complained during the night of pain in the occipital region, and was very restless. The tongue next day was found brown, but moist; the effusion in the lids was so great as to close them. The eyeballs seemed prominent. During the next two days, he became much more delirious, and in the night riotous. He refused his food. When ordered to put out his tongue, he seemed unable to do so. The pupils were insensible and firmly contracted. The swelling of the eyelids was less, but the eyes were more prominent. The scalp-wound looked dry and glazed. He complained much of pain in the right shoulder. No fracture could be detected. Leeches were applied to the shoulder. He was ordered calomel and opium in small doses every three hours; and some gin was given him. On August 30th, it is noted that he was frequently very boisterous during the day. He seemed to know when he was spoken to, but was unable to answer. Ecchymosis was present in the right conjunctiva. His pulse was 140, very feeble. The skin, especially of the face, was very hot. Next day (August 31st), the right arm and leg were found to be paralysed, and to have lost sensation. He passed his water and fæces involuntarily. On September 1st, he was more sensible, so that he would put his tongue out when told to do so; but towards evening he became again insensible, and on the following day he had violent convulsions, almost entirely on the paralysed side. The pupils were insensible, contracted, and fixed; the teeth firmly clenched; and he foamed at the mouth. The paralysed side seemed hotter than the other. The pulse varied during the fits from 160 to 60. He passed into a state of exhaustion, and died at 1 A.M. next morning.

On *post mortem* examination, a fracture was found extending from one orbit to the other, across the anterior fossa of the base of the skull, and completely detaching the crista galli. The fracture did not extend beyond the orbital plate on either side. The frontal sinus had been laid open by the detachment of a small piece of bone in front of the crista galli. In the roof of the left orbit, a small piece had been driven upwards, piercing the dura mater, and lacerating the adjoining part of the brain to a slight extent. The brain was otherwise healthy. The dura mater appeared healthy. On the left side, there was a large collection of pus in the cavity of the arachnoid, producing considerable pressure on the brain. This collection passed from the base upwards over the whole hemisphere, but not down the falx. The right side was healthy.

The injury to the right shoulder was found to have been a partial fracture separating part of the great tuberosity from the rest of the bone, comprising the tendons of insertion of the supra and infra spinatus muscles. There was a large abscess, containing foul pus, external to the capsule of the joint. Connected with the fracture of the patella was also a large collection of foul matter in the right knee-joint. The spinal cord was healthy.

REMARKS. This is a case which is rarely met with in injuries of the head: viz., one in which the blow delivered on the head produces fracture of the base by direct violence limited to that region of the skull, and lacerating the brain by depression of a portion of the bone upon that organ. The symptoms indicating such a fracture were, as will be seen, only obscure; and this may give us a hint of the frequency of fracture of the base of the skull: especially when we take into account the not very great rarity of the specimens of united fracture met with, considering the number of cases in which the bones of the skull are care-

fully examined. The cause of the patient's death was, no doubt, compression of the brain from the extensive suppuration in the arachnoid cavity—a condition not relievable by any operation, had any been admissible.

II. TWO CASES OF VALVULAR LESION OF THE HEART.

[*Communicated by* G. G. Rogers, M.D., *Medical Registrar.*]

Case I. S. W., aged 25, a phthisical looking woman, nervous and depressed, was admitted, under the care of Dr. Page, on May 14th. She complained of pain in the left iliac region, which was aggravated by pressure, and which she had suffered from ever since her confinement, a month ago. Rigors, alternating with heats and sweats, had attacked her for some days previous to admission. On both sides of the chest, the inspiration was harsh, but percussion gave everywhere a clear sound. Draughts containing ammonia and aromatic confection were given every six hours, and the abdomen was covered with a linseed-meal poultice.

May 16th. During the night she had a good deal of shivering. This morning, the abdominal pain was considerably alleviated, and did not return until

May 19th. She now became very uneasy, and was attacked with vomiting after meals. This symptom was checked by sinapisms applied to the epigastrium.

May 21st. She appeared much lower, and was ordered port wine.

May 29th. During the intervening days, she had frequently severe attacks of pain, which were confined to the abdomen. On this day, however, the pain began to extend down the left thigh, and was of so excruciating a character that she could obtain no sleep. Her breathing remained as good as ever. It should, however, be mentioned, that on more than one occasion the heart had been examined with the stethoscope, and a systolic murmur was plainly audible at the apex. She gave no account of any rheumatic attack. The urine contained no albumen.

June 5th. The pain in the thigh had been allayed by anodynes since the last date. During the night, she lost the use of the left arm and leg, but did not become unconscious, nor wander in her talk. After being spoken to, she relapsed into a state of partial stupor.

June 6th. Her mouth was slightly drawn, and the tongue protruded *to the right;* there was also slight ptosis of the left eyelid. The paralysis of the left arm was complete, but some power of motion remained in the leg. A blister applied to the neck somewhat roused her from her torpor.

June 14th. She became irritable, and depressed in spirits. Bark and dilute acid were given, and she continued the anodyne at night.

June 20th. She had somewhat recovered the use of her left arm; and, with the return of power, there was considerable pain in the limb. The fingers remained swollen and powerless.

Early in July, cough with muco-purulent expectoration set in, and she had much pain in the chest on deep inspiration. Attacks of syncope followed, with loss of appetite, rapid diminution of strength, and œdema of the lower limbs; and, as any attempt to swallow food induced vomiting, which no remedies could check, she shortly died in a state of inanition.

The body was examined twenty-three hours after death. There was a large quantity of subarachnoid fluid, but the brain was firm, and presented no unnatural appearance. There were a few old adhesions on the right side, and both pleural cavities contained a good deal of turbid serum. The lungs were much loaded with fluid, and the back part of the right lung was so much consolidated that it only just floated in water. There was a fibrinous vegetation of very large size occupying both flaps of the mitral valve on their auricular surface, and almost obstructing the orifice. The liver was very large, extending down below the umbilicus, and fatty in texture; its weight was 4 lbs. 10 oz. The suprarenal glands were healthy. The spleen contained a large fibrinous block, as did the right kidney, which was of large size, weighing 8½ ounces, whilst the left weighed only 5 ounces. Both kidneys were smooth and pale. The iliac vessels were healthy, but the glands around the left external iliac vessels were enlarged. The uterine organs were healthy.

Case II. T. W., aged 60, a gravel-digger, was admitted July 21st, in a state of great distress from violent dyspnœa. The heart's action was weak, the sounds prolonged at the base, and a systolic murmur could also be heard in this spot. He gave no history of rheumatism; and his illness appeared to have been caused by long continued exposure to the cold, and by working knee-deep in water two months previously. The legs had been œdematous three weeks. There was no trace of albumen in the urine, which was scanty. Diuretics were ordered; and, a week later, the sesquichloride of iron was given. After he had been in the house a few days longer, the tissues over the chest became anasarcous, and orthopnœa increased to such an extent that he was glad to recline or sit in all sorts of extraordinary positions to gain a little ease. He lingered in great suffering until the 5th of August.

The examination of the body took place twenty-seven hours later. The right pleural cavity was obliterated by old adhesions; the left contained a large quantity of serous fluid. The lungs were healthy. The heart was of very large size, weighing twenty-three ounces. All the cavities were much dilated, but the walls were not very thick. The valves on the left side were much diseased, the anterior flap of the mitral being rigid and much thickened by deposit, apparently fibrinous, on its auricular surface. The flaps of the aortic valves were extensively occupied by atheromatous deposit, which in many places was calcareous; and one of them was so closely adherent to the wall of the artery as to admit of very little motion. The artery itself was dilated, and occupied by atheroma and some calcareous deposit. The arteries of the abdomen were healthy. The liver was "nutmeggy", the spleen very solid, and the suprarenal bodies healthy. There were one or two small cysts on the surface of the left kidney.

Remarks. The first of these cases possesses no little interest, and affords ample room for indulging in speculations as to the remote and proximate causes of very urgent symptoms. The autopsy certainly did not reveal enough to account for them. Owing to defective or tardy cerebral circulation, serum was rapidly poured out into the subarachnoid cavity, and it is somewhat singular that, although incomplete hemiplegia was produced thereby, the patient did not die comatose. It is highly probable the woman had suffered from uterine phlebitis before her admission. The rigors which occurred after she came under our notice, and the extension of pain and tenderness from the iliac fossa down the left thigh, led to the belief that similar inflammation was about to attack the vessels of the limb. No coagula were, however, found in the iliac or femoral veins; their coats were not thickened, the adjacent cellular membrane was not infiltrated with pus, and none of the glands were suppurating. Whether such glands as were enlarged in the neighbourhood of the external iliac vessels could, by their mere pressure on the anterior crural and crural branch of the genito-crural nerve, cause such acute pain as this patient suffered from is exceedingly doubtful. After the 5th June, more than a month before her death, the pain almost wholly left the thigh and abdomen, so that there exists ground for belief that in the vessels of the left thigh a measure of inflammation existed at one time, which terminated subsequently by resolution.

The statistics of Dr. Barclay, as gathered from the medical wards of St. George's Hospital, (*Med.-Chir. Trans.*, vol. xxxi) show that in nearly all cases, where morbus cordis proves fatal at a comparatively early period of life, the lesion is dependent upon rheumatic endocarditis; and in the same paper, it is pretty clearly proved that when both sets of valves (aortic and mitral) are diseased, the patient will be found to have suffered at some period or other from acute rheumatism. The female patient was only twenty-five years old, whilst the man had reached the age of sixty. By neither was there any account given of a rheumatic attack, and both were intelligent and able to answer clearly questions put to them: it is not, therefore, very likely that an imperfect previous history was obtained. Both cases form an exception to a fairly laid down rule, and can only be ranked amongst those of idiopathic cardiac disease. How such disease first originated is not very clear. The kidneys were free from any organic change, so that this fruitful source of heart-affection is excluded. Neither was there any deformity about the chest which might cause obstruction to the passage of the blood to and from the heart. If we say that the disease originated in some alteration in the physical properties of the blood, we make an assertion without giving a very clear definition of our meaning. In the present imperfect state of our knowledge, however, this seems to be the most rational method of accounting for the setting up of disease in the central organ of the circulation; and it may well be imagined that the weakening of the system by parturition in the first patient, and the hardships and exposure undergone by the second, produced an impoverished condition of the vital fluid, and consequently defective nourishment of the apparatus designed for its distribution throughout the system.

Original Communications.

ARSENICATED WALL-PAPERS.

By James Whitehead, M.D., Manchester.

A paragraph has recently appeared in several newspapers on the subject of arsenicated wall-papers, containing a statement of which the tendency will be to mislead those who happen not to be well acquainted with the subject.

It appears that the Commissioners of Inland Revenue, having entertained the impression that the green paper with which some of their offices were lined was injurious to health, directed Mr. Phillips, their chemist, to institute an investigation as to whether such papers, as had been alleged by Dr. Halley, were likely to produce a poisonous influence on the system.

"Mr. Phillips's report, which (as the paragraph states) is printed in the *Journal* of the Society of Arts, is perfectly conclusive in solving this question in the *negative*."

Now this statement, correct no doubt in so far as it has reference to the papers which Mr. Phillips examined, may not equally apply to green papers generally.

Mr. Phillips rightly states that the degree of heat which would be necessary to volatilise arsenic would be humanly insupportable, and consequently arsenic is not likely to be liberated by this agency in apartments wherein human beings dwell. It is obviously not by this means, therefore, that arsenicated papers prove deleterious. Mr. Phillips admits that particles may be separated in the process of cleansing by means of brushes where the glazing is imperfect.

In truth, arsenicated papers which are perfectly smooth and properly glazed are probably harmless. But it is altogether different with the tufted or flock papers, and also with the flat papers which are unglazed.

In the autumn and winter of last year, I attended a youth labouring under symptoms of arsenical poisoning, viz., aphthous ulceration of the gums and tonsils, violent frontal headache, great languor, nausea and occasional vomiting, inappetence, diarrhœa, disturbed sleep.

The complaint, mild at its onset, gradually increased in severity, spite of treatment, and at the end of eight or ten weeks, the patient was removed to the country, where he was speedily restored to health. I had repeatedly expressed a suspicion that the symptoms were those of effluvial or other kind of poisoning, and the supply of water and state of the drains were consequently examined; but in these no cause of complaint was found.

On his return home, perfectly well, he was placed in the same apartment; but in the space of four weeks, was worse than before. He had spongy gums, diphtheritis, violent neuralgia of the forehead and face, great languor, occasional diarrhœa, and emaciation. Attention was next directed to a cistern placed against the wall outside his bed-room, which it was thought might possibly have had a share in producing the mischief, and it was therefore subjected to alteration. This measure necessitated a change of apartment for the space of a fortnight, at the end of which period he was the third time located, again in perfect health, in his own room. In the space of three to four weeks after his restoration, the symptoms reappeared in an aggravated degree of severity, and this time it was believed, as had already been several times suggested, that the cause of all the annoyances would be found in the paper with which the apartment was lined. Such being the conviction, both of myself and the family, the paper was replaced, without loss of time, by one of a totally different tint, and was followed by results every way satisfactory. The youth, who has continued to occupy this room from that time until now, remains perfectly well, having had no relapse of symptoms since the removal of the green paper.

The apartment in question, formerly used for other purposes, was converted into a sleeping-room in the summer of last year, 1857. Its walls were covered with a rich green tufted or flock paper, which was placed thereon about four years ago; and it was remembered that the workman who was engaged to hang the paper had made use of the expression, during the operation, that he disliked working with that sort of paper, as it always made him ill. During the process of papering, the floor of the room was coated with green dust, and since that time, whenever the room was cleansed, the dust which rested on the furniture always imparted to the articles used in the process of cleansing a green tinge, showing that particles were constantly being detached from the wall. When used for a few days in succession as a sitting-room, as it had been formerly, the occupants began to feel uncomfortable, and were, from that circumstance, induced to desert it for a period.

Having procured a portion of the detached paper, I scraped off from the raised parts a quantity of green powder, which was submitted to chemical examination. Thirty grains were sent to a chemist, with a request that he would ascertain whether the article contained arsenic, and if so, in what proportion. The remainder was examined by myself. The results were as follows:—

1. Note from the chemist: "I find the quantity of arsenious acid contained in the thirty grains of substance which you forwarded amounts to about eleven grains."

2. A quantity of the green powder thrown upon a hot iron emitted an odour of garlic, characteristic of volatilised arsenic; mixed also with a peculiar metallic flavour.

Four grains, all that remained of the powder, were boiled in four ounces of water in a glass vessel, and submitted, after filtration, to the following tests.

3. Ammoniacal nitrate of silver threw down a pale brownish precipitate.

4. Ammoniacal sulphate of copper gave no result.

5. Sulphuretted hydrogen gave no result.

It is highly probable that the quantity of the green powder used in making the solution for the last three experiments was too small; and moreover, by an unfortunate mistake, the solvent employed was not distilled, but spring water. This would be sufficient probably to render the tests inoperative.

The fragment of paper from which the green powder was obtained measured less than a square foot in extent, and the ascertained superficies of wall covered by the paper was 350 square feet. Allowing, therefore, that eleven grains were held by the portion experimented upon, it follows that the quantity of arsenious acid remaining on the wall-paper, after four years usage, would amount to at least 3,850 grains.

Although the tests Nos. 4 and 5 gave no indication of arsenic, I cannot doubt that arsenious acid, and probably arseniuret of copper, formed the deleterious agents in this paper.

HYSTERIC HYDROPHOBIA, WITH DELIRIUM TREMENS.

By John Wheatcroft, Esq., Cannock.

Mr. G. H. S., aged 29, presented himself at my surgery July 25th. He was in a state of great nervous excitement, stating that he had been bitten by a dog three weeks previously. "I have been a medical student," said he, "although I am now travelling for a wine and spirit house. I feel dreadfully alarmed lest I should become hydrophobic. I was bitten by a dog whilst fighting. I applied nitrate of silver to the wound; but my limbs feel very stiff; my jaw feels queer; my salivary glands act abundantly; I cannot sleep. I have ceaseless dread of rabies."

I examined the wound, which was in the right popliteal space. There were teeth-marks, looking rather sloughy, with evidences around of the application of the nitrate of silver. On inquiry, I found my patient had been drinking to excess. There was tremor of the hands and tongue, a wild appearance of the countenance, commingled with an expression of intense anxiety. I endeavoured to soothe his terrors, and ordered a mixture of carbonate of ammonia with tincture of opium, ten drops to the dose. Whilst I was so engaged, he fell on the surgery floor, in a fit, evidently epileptic. The convulsive struggles were very protracted; the face became livid; the tongue bitten; large quantities of foam issued from the mouth. Perfect intellectuality was never re-established. In three hours, the fit was repeated. On my visiting him half an hour afterwards, he was somewhat sensible, and answered questions intelligibly; but still there were the wildness of countenance and loss of memory. He complained of a choking sensation about the larynx. I offered a glass of water. The patient took the vessel eagerly; but, the moment the glass neared his mouth, there came on laryngeal spasm, and a shudder, a scream, and choking. This occurred four several times on my presenting the fluid: the patient looked piteously at me, and, with difficult articulation, said, "Mad, mad! Hydrocyanic acid give me, give me. Don't let me go quite mad; poison me

as a—as a favour." I endeavoured to quieten his apprehensions, demanded an immediate consultation, and administered four grains of opium, which was swallowed with difficulty. In half an hour, all hydrophobic symptoms had disappeared, and the case became one of pure delirium tremens, terminating fatally in three days.

Post mortem examination of the head revealed extensive congestion of the superficial cerebral veins. The substance of the brain itself was uninjected, but universally as soft as butter. The lateral ventricles were distended with serum. A small coagulum was found on the petrous portion of the right temporal bone.

The case appears to me interesting, from the fact that hysteria can assume any form of disease.

Periscope.

ANATOMY AND PHYSIOLOGY.

GROWTH OF THE CRYSTALLINE LENS.

Mr. J. W. Hulke has investigated some points connected with the structure and growth of the crystalline lens, and has published the result of his researches in the *Ophthalmic Hospital Reports* for July 1858.

The crystalline lens, Mr. Hulke observes, is contained within a highly elastic and perfectly transparent capsule, which forms a shut sac, everywhere continuous, although, on account of certain peculiarities, the anterior and posterior hemispheres are, by a loose way of speaking, often called the anterior and posterior capsules, as if they were distinct structures. The capsule of the human lens is perfectly homogeneous and glassy, without any traces of structure, but the torn edges of the thicker capsules of the larger ruminants sometimes display parallel lines suggestive of lamination. There are, also, upon the human capsule certain marks, which some persons have considered indicative of its anatomical construction, but these marks do not really bear this interpretation. The delicate converging lines which stretch from the attachment of the suspensory ligament for some distance, towards the anterior pole, and the similar but fainter lines upon the outer surface of the posterior half of the capsule, are due to the peculiar arrangement of the fibrous cordage of the suspensory ligament.

It is commonly stated in anatomical works that the capsule of the crystalline lens is lined by a delicate layer of pavement epithelium, which forms the medium of that adhesion which naturally exists between the healthy lens and its capsule. The capsule being a perfectly closed sac, the nutrition of the lens is effected by osmotic currents through the delicate membrane, and the nucleated epithelial cells appear to take an important part in the elaboration of the nutritive matter; the lenticular fibres are also developed from these cells,—a fact which, Mr. Hulke believes, was first taught by Mr. Bowman in his lectures on the eye, delivered at the Moorfields Hospital in 1847, and which has since been confirmed by Kölliker, who has described at great length the structure of the lens, and the development of its fibres. Having enjoyed peculiar opportunities of obtaining recent healthy and morbid lenses for examination, Mr. Hulke has been enabled to follow with some minuteness the various stages of the process.

The intracapsular epithelium does not line the whole inner surface of the capsule, as was formerly thought to be the case, but it has been ascertained by Kölliker that its presence is confined to the anterior hemisphere, in different parts of which it presents very different appearances. For convenience of description, Mr. Hulke divides the anterior hemisphere of the capsule into a central region, the area immediately around the pole, and a marginal region, the zone stretching from the central region to the edge of the lens.

In the central region, the epithelium is a delicate pavement formed by a single layer of large polygonal cells joined edge to edge; the cells are conspicuous for their sharp outlines, and each contains a large circular nucleus, which in turn encloses two or three small dark dots or nucleoli. The nuclei are remarkable for their uniform size and regular circular outline; they occupy the centre of the cells, and each nucleus is separated from the neighbouring ones by a space about equal to its own diameter.

In the marginal region, the epithelial cells are much smaller and much more closely packed together. The nuclei are smaller; they have a less regular outline, and are separated by extremely minute intervals,—indeed, they are sometimes almost in contact, and the walls of their containing cells can hardly be made out. The epithelium in this region is not arranged as a simple pavement, but rather in the form of a bed, in which the cells are crowded in superimposed layers: the bed is not prolonged beyond the edge of the lens, and the inner surface of the posterior hemisphere of the capsule is void of epithelial lining. The transition from the large polygonal cells of the central region to the small crowded ones of the margin is not abrupt,—every possible gradation occurs between these extreme forms. This epithelial bed at the margin of the anterior half of the capsule is the matrix of the lens; in the young it contains free nuclei, and it is the growing part in which the lenticular fibres are formed by the growth and metamorphosis of the cells. Young subjects furnish the best objects for the study of these changes.

In the growing lens the cells of the matrix become elongated in opposite directions, and this lengthening proceeds until, at last, the epithelial cell has become a flattened band, which ultimately assumes the form of the perfect lenticular fibre.

As the cells of different layers become elongated, an imbricated arrangement takes place, and the growing fibres are disposed in different layers, in which those of one layer alternate with those of the other layers immediately in contact with it.

The position of the matrix at the equator accounts for the extension of the lens in this direction, and explains to us how the spherical lens of the infant in the process of growth becomes flattened and expanded, until it finally assumes the biconvex discoid shape of the adult organ. The arrangement of the mesial planes of the lens in man and in the lower animals was several years ago described by Mr. Bowman, who contrasted the simple tripartite plan, which obtains in the human fœtus with the highly complex arrangement which the adult lens presents, and inferred that the multiplication of the mesial planes outwards is a process necessary to the expansion and flattening of the organ, and that this takes place by a deposition of new fibres on the old.

It will have been seen that this account of the development of the fibres of the lens coincides with that given by Mr. Bowman and by Kölliker. These views differ very widely from those held by several other observers, amongst the more recent of whom may be mentioned Testelin, who, in several late numbers of the *Annales d'Oculistique*, has described with great minuteness the structure of the lens and the evolution of its fibres. He describes six kinds of cells and fibres differing from each other and occupying different planes; but whilst Mr. Hulke admits that fibres taken from the superficial parts, and from the centre of the lens respectively, possess certain peculiarities, there is really no abrupt transition from the one to the other set of fibres, and he cannot help thinking that Testelin has made a needless subdivision; moreover, some of his illustrations lead to the suspicion that he has depicted as natural conditions appearances which have been produced artificially. Testelin describes a layer of cells, the corpuscles of Morgagni, distinct from intracapsular epithelium; these Morgagnian corpuscles are transformed into a second set of cells, the embryonic vesicles, within which the evolution of the lenticular fibres takes place. Each embryonic vesicle contains one or more elementary corpuscles, the germs of the lenticular fibres, the corpuscles enlarge, undergo a spiral cleavage, and are thus changed into ribbon-like bands, spirally coiled within the parent cells. At a subsequent stage the parent cells are ruptured, and the spiral bands set free immediately uncoil themselves, and so come to resemble perfect lens fibres. According to this view, the development of the fibres of the lens takes place in an endogenous manner, and the intracapsular epithelium has no share in the process. But how are we to explain the appearances which M. Testelin describes? The cells and globules which are commonly found on the surface of the lens are in part altered, swollen intracapsular epithelium, and in part albuminous globules, which have oozed from the interior of the lenticular fibres, the softer nature of the superficial fibres rendering this exudation more easy. The peculiar junction of the fibres of the lens by the interlocking of the serrations along their edges is so close a mode of union that absolutely no interval is left between the adjacent fibres in any one plane, and the alternating arrangement of the fibres in planes which

touch one another conduces to the same end. A transverse section made perpendicular to the long axes of the lenticular fibres, shows at a glance how very closely they are packed; there is no room left for the presence of layers of cells between them.

When a lens has been hardened in a solution of chromic acid, or any other chemical substance which coagulates albumen, it becomes swollen, and the fibres in the interior undergo considerable pressure, to such an extent that occasionally several planes of fibres are condensed into a glassy block, in which the original fibrous character is almost lost. In this condensation beads of albumen are pressed out of the fibres, and coagulate in small masses of globules, flattened at the points of mutual contact; these globules have sometimes a deceptive cellular appearance.

ADAPTATION OF THE HUMAN EYE TO DISTANCES.

The *Proceedings of the Royal Society* contain a paper on the above subject by Mr. Charles Archer, surgeon in the Bengal Army. The following is a summary of the author's views:—

1. The eye is adapted to varying distances principally by an alteration in the fibrous arrangement of the lens itself. Moreover, that when the lens is removed after an operation for cataract, the power of adaptation is nearly lost, and can only be exerted within very confined distances.

2. The purpose of focalising light at short distances is doubtless assisted, as suggested by Bowman, by the contractions of the ciliary muscle, in its antero-posterior direction, bringing forward the ciliary processes.

3. As the posterior hemisphere of the capsule is firmly united to the hyaloid membrane, this portion must always remain quiescent, and therefore the antero-posterior contractions of the ciliary muscle must be very limited as regards the lens.

4. The ciliary muscle, being placed around the eye, and its fibres being of a somewhat plexiform character, the contractions of the muscle will relax those yielding portions of the eye placed within its circumference.

5. The relaxations of the ciliary processes will deprive the capsule of its firm support. It will be pressed forward by the lens, which will meet with no further resistance to the expansion of its short axis.

6. The lens itself, as microscopically described by Bowman and Kölliker, is admirably adapted to the varying changes which take place in the capsule.

7. The posterior capsule being firmly united to the hyaloid membrane, the alteration in the diameters of the cavity of the capsule must take place from the periphery of the lens to its centre, and from behind forwards, but not from before backwards, on account of the close union of the posterior capsule to the hyaloid membrane.

8. To allow such alteration to take place without endangering the achromatism of the lens, the alterations in the plane of its long diameter must be synchronous with the alterations in the plane of its short diameter. To allow of this, the margin of the lens is free in the canal of Petit; were it not the case, chromatic aberration would result.

9. The elasticity of the capsule of the lens and the ciliary muscle are antagonistic; that on the ciliary muscle becoming relaxed, the capsule of the lens is free to exert that elasticity.

10. By the pressure exerted by the anterior hemisphere of the capsule, by means of the polygonal cells of Virchow, on the anterior face of the lens, the organ is able to fulfil all the requirements for adapting it to receive focalised light from long distances.

11. The polygonal cells of Virchow are placed on the posterior surface of the anterior hemisphere of the capsule with the view before mentioned, and that they are arranged with their long diameters in an antero-posterior direction, that pressure may not injure their transparency, which would be the case if placed laterally.

12. These cells are not found in other parts of the capsule.

13. The fibres of the lens are cerrated for the purpose of uniting either to other, so as to allow them greater freedom of motion without altering their ultimate relations to each other.

14. The ciliary muscle is very highly endowed with nervous matter to supply all these varying requirements.

15. By the above postulates, all the modern discoveries in the microscopical anatomy of the eye receive a distinct expression of their individual functions, and, by so doing, adapt the organ of vision to the acknowledged laws of light. (*Dublin Hospital Gazette*, September 13th.)

FUNCTIONS OF DIFFERENT PORTIONS OF THE CEREBELLUM.

At the last meeting of the American Medical Association, a report on the functions of different portions of the cerebellum was presented from Dr. E. Andrews of Chicago. The following is an abstract:—

The cerebellum is divisible into three lobes; one median and two lateral. The muscular system of most animals is divisible into two groups, viz., those which act upon the anterior extremities and the adjacent parts of the trunk, and those which move the posterior extremities and the corresponding portion of the trunk. There is a direct ratio between the strength and bulk of the anterior group of muscles, and the size of the median lobe of the cerebellum. The lateral lobes manifest a double ratio, their size being as the strength of the posterior group of muscles, and also as the size of the hemisphere of the cerebrum. It is inferred that the action of the cerebellum is to *excite* motion, and not merely to *co-ordinate* it; that the influence of the median lobe is chiefly expended upon the anterior group of muscles; and that the action of the lateral lobes is in some manner double, part of their influence acting upon the posterior group of muscles, and part of it having some relation to mental power, whose exact nature is not yet understood. The facts and arguments are drawn from comparative anatomy, and illustrated with outline drawings.

MIDWIFERY AND DISEASES OF WOMEN.

OVARIAN TUMOUR REMOVED BY THE ÉCRASEUR: RECOVERY.

On January 29th, 1858, Dr. John L. Atlee, of Lancaster, Pennsylvania, was sent for to see Mrs. E. E., aged 60. She had commenced menstruation at 17; had married at the age of 23, but had never conceived. Menstruation continued up to the age of 52. In January or February 1857, enlargement of the abdomen was perceived; and in August, she consulted Dr. Rodgers, who found a fluctuating swelling occupying the whole lower part of the abdomen. Diuretics, hydragogues, and mercurials, were given for some time without any good effect; and the true nature of the disease appears not to have been understood until December 17 of last year, when after several pounds of albuminous fluid had been removed by tapping, a large tumour was found occupying the left hypogastric, iliac, and lumbar regions. When Dr. Atlee was called in, his examination led him to form the diagnosis of a multilocular tumour of the left ovary. She was, subsequently to the first occasion, tapped three times, but without any permanent relief; and at last consented to an operation, which was performed on March 23. The patient having been put under the influence of ether and chloroform, an incision was made from one inch below the umbilicus to two inches above the pubes; but this had subsequently to be enlarged an inch at each end, in consequence of the presence of some smaller cysts at the base of the tumour. The tumour had expanded the broad ligament, and had encroached upon the portion of peritoneum existing between it and the colon, so as to leave the pedicle for the application of the ligature but one inch long, four inches broad, and highly vascular. As Dr. Atlee had seen at least one fatal result from applying the silk ligature to the pedicle too near the colon, and as the silver ligature would, though less irritating, leave the proximal portion of the pedicle a sloughing mass in the abdomen, he determined to use the écraseur. The whole tumour being drawn up and held steadily, Dr. Atlee grasped the pedicle firmly with the forefinger and thumb of the left hand. The chain of the instrument was now passed round the pedicle, very close to the tumour and moderately tightened. By maintaining the position of the left hand very firmly—the screw of the instrument being held by an assistant—Dr. Atlee was enabled to operate upon the lever with the right, and to prevent the colon from being drawn toward the chain. The lever was turned for half a minute, then stopped for half a minute, and so alternately till the pedicle was severed, which occupied six minutes and a half. The colon had entirely escaped, with a margin of peritoneum one inch wide. The torn surface of the pedicle was carefully sponged and examined; the abdomen was kept closed for several minutes, and no hæmorrhage, nor even oozing of

blood could be detected. The fluid which had escaped from the cysts was sponged out, and the external wound was closed by four silver sutures and adhesive strips, supported by a compress and flannel bandage. During the whole operation, the patient suffered but little: her pulse remained at 90 throughout, except for a few moments, when it became weak. There was no nausea or vomiting at any period. The whole weight of the mass, solid and fluid, was seventeen pounds and a half.

In the evening of the day of the operation, some reaction set in, but entirely subsided before the next morning. The subsequent reports are merely those of a steady progress towards recovery. The sutures were removed on the seventh day, and she sat up for the first time; on the ninth day, the bowels were moved, for the first time, by a dose of castor oil; and, on the fourteenth day, she was sufficiently well to ride with Dr. Atlee half a mile to his office, to see the tumour.

Dr. Atlee observes, that this is the eighth case in which he has operated for the removal of diseased ovaries. In two of these cases, both ovaries were diseased and removed; one of the patients died on the twelfth day. In all the preceding cases, he could perceive the disturbing effects of the presence of the silk ligature round the pedicle, as well as of those used to restrain hæmorrhage; and, until they came away, they were more or less a source of anxiety. With the écraseur to sever the pedicle, and the use of the silver suture and silver ligature, where ligatures are necessary, he is satisfied that a very large share of the dangers attending the operation will be obviated. Mrs. E. is, Dr. Atlee thinks, the oldest patient on whom the operation of ovariotomy has been performed. Dr. Clay of Manchester reports his two oldest cases at 57 and 58. She was excessively reduced by the frequent tapping and refilling of the cyst, as well as by the previous active treatment; and yet she recovered more rapidly, and with much less constitutional disturbance, than any other patient on whom Dr. Atlee had performed a capital operation. (*North American Medico-Chirurgical Review*, July 1858.)

CATAMENIAL HÆMATOCELE.

There has lately been in the Hôtel-Dieu, under the care of M. Trousseau, a young woman who has had monthly returns, since March 14th of the present year, of what is designated catamenial hæmatocele. For several years, much attention has been directed to retro- or periuterine hæmatocele; but much confusion has existed on the subject, which M. Trousseau would remove. For instance, under the name "retrouterine hæmatocele" are included effusions of blood which ought to be distinguished from each other, according to their source and their seat. Thus, under this name are comprehended thrombus of the pelvis, as described by Deneux—an effusion into the subperitoneal cellular tissue during accouchement; effusion into the same tissue, the result of a laceration of the vessels caused by external violence; effusion into the peritoneum, from rupture of sanguineous cysts of the ovary, or from rupture of the ovum in extrauterine pregnancy; and sanguineous effusion into the peritoneum, produced under the influence of ovulation. This latter affection is, in M. Trousseau's opinion, nothing but an internal menorrhagia, and requires not surgical treatment, but medical.

To explain the occurrence of catamenial hæmatocele, M. Trousseau calls to mind the phenomena which occur in the uterine system during ovulation. Under the influence of the menstrual act, the whole uterine system is in a state of congestion which may be seen by the speculum. The neck of the uterus is swollen; the vagina, the labia majora and minora, are in an evident state of erethism; and at the same time, there is pain along the broad ligaments—a feeling of weight produced by the turgescence of the hæmorrhoidal vessels. This great flow of blood to the uterus is followed every month by a hæmorrhage. What is the seat of this? In general, M. Trousseau observes, the seat of hæmorrhage (at least in disease as distinguished from injury), is the mucous membrane. It is not probable that the blood descends each month with the ovum along the Fallopian tubes; for the disruption of the ovum is a process of enucleation, and cannot produce hæmorrhage; uterine hæmorrhage occurs either from the internal surface of the uterus, or from the interior of the Fallopian tubes. It now becomes very easy to understand the formation of catamenial hæmatocele.

It is from the upper part of the Fallopian tube that M. Trousseau believes the blood in such cases to be derived. He does not think it possible, from the rapid coagulation of the blood in the vagina, that the fluid poured into the peritoneum can have passed upwards through the uterus and tubes.

This theory perfectly accounts for the monthly relapses to which women who have once had catamenial hæmatocele are subject. An excessive flow of blood to the uterine region and a special predisposition are sufficient to produce catamenial hæmorrhage at definite periods for an indefinite time. The patient referred to above is an example of this. Between two and three years ago, she had retrouterine hæmatocele each month, for four months. During two years, her catamenia were regular; but, on March 14th last, she was admitted into hospital with an enormous hæmatocele, which disappeared, and appeared again at the monthly periods in April and May.

When once the blood is poured into the peritoneum, it follows hydrostatic laws. The patient is obliged to lie down to relieve the pain which she feels; and the fluid gravitates to the lower and back part of the pelvis. It accumulates in the recto-vaginal *cul-de-sac;* then it passes beyond the ligaments into the iliac fossæ; thence it ascends, and submerges the uterus. In M. Trousseau's patient, the effusion reached the umbilicus. This female presented also a peculiarity which obscured the diagnosis: the hæmatocele was accompanied by a menorrhagia with retention, so that the uterus was excessively distended, and a round hard body was felt above the pubes, which M. Laugier at first imagined to be a polypus. But, on examining by the rectum, this surgeon (who had long known the patient), ascertained, as he had done before, the existence of an immense mass enveloping the uterus.

Among the symptoms of retrouterine hæmatocele are two prominent ones—hypogastric pain, and loss of colour. Whenever a woman, at the monthly periods, complains of pain in the hypogastric region, and suddenly loses colour, catamenial hæmatocele may be diagnosed. The pain, M. Trousseau thinks, is not indicative of a peritonitis; and, in support of this, he refers to some experiments which he made at Alfort in 1826, and which led him to the conclusion that the effusion of blood into a cavity, such as the pleura, does not produce inflammation or other serious result. The pain felt when the hæmatocele first appears is, he believes, altogether catamenial, and produced by the local determination of blood. The rapidity with which the effusion is removed itself indicates that the peritoneum has not been seriously affected. In the patient whose case has been mentioned, the effusion reached the umbilicus, but was entirely absorbed in twenty days. On May 29th, the hæmatocele appeared; on June 8th, it had completely disappeared.

The affection then demands the ordinary treatment of menorrhagia; and, of all remedies employed in this malady, M. Trousseau confides in none so much as in cinchona. In the usual hæmorrhages of adolescents—at least those which, from their abundance, sometimes threaten life—the power of cinchona in arresting them is astonishing. It is enough to merely take for three mornings, while fasting, from half a drachm to a drachm of powdered calisaya bark in some sweetened coffee. M. Bretonneau has imagined that cinchona might have the same effect in menorrhagia; his plan of treatment consists in administering enemata of cinchona, or the powder, during two or three days in succession during the intervals for three or four months. This treatment is not infallible, though often very powerful.

As M. Trousseau's patient presented much anæmia and debility, he gave her iron with the quinine. Under this treatment, her colour and strength soon returned, and at the next menstrual epoch (which occurred a fortnight from the commencement of the treatment,) the catamenia were regular. If the hæmatocele had reappeared, the patient would take dilute sulphuric acid, and large doses of rhatany; then, when the hæmorrhage was arrested, iron and cinchona would be given. That is to say, M. Trousseau would treat the hæmatocele at the moment of its formation in the same way as he treats ordinary menorrhagia.

The pain, in M. Trousseau's case, was relieved by hemlock poultices, moistened with a mixture of belladonna and opium. This mixture consists of two parts of alcoholic extract of belladonna, and one part of gummy extract of opium, with sufficient water to form a syrupy mixture.

The observations, of which an abstract is given above, appeared in the *Journal de Medecine et de Chirurgie Pratiques* for July 1858. In the same Journal, for September, it is reported that M. Trousseau's patient had had no return of the hæmatocele. The treatment had consisted in taking a drachm of calisaya bark every third day, and a preparation of steel daily.

ARAB METHOD OF REDUCING AN INVERTED UTERUS.

A Jewess, aged 35, was one day delivered, after a labour of four hours, of a living child. She was assisted by another Jewess, who pulled at the funis until she broke it. Dr. Castex was called in, and found that the uterus had been completely inverted by the ignorant woman, who had mistaken it for the placenta. All attempts at reduction failed, and Dr. Castex retired in great anxiety as to the result: but, the next morning, he was told that a Moorish woman had reduced the tumour. He learned that two strong men had held up the patient by her feet, with the head downwards; that the Moorish woman had poured a bottle of oil over the tumour, and that pressure with the hand had effected reduction. Unfortunately, the woman died in a few days from metro-peritonitis. Dr. Castex does not attribute this to the curious process resorted to to reduce the tumour, but rather to the barbarous manœuvre of the Jewish matron, and to his own ineffectual attempts to reduce the tumour. (*Gazette Médicale de l'Algérie*, No. VIII, 1858; and *L'Union Médicale*, August 31st.)

SURGERY.

CHRONIC SINUOUS ABSCESS OF BONE.

Under this title, Dr. T. M. Markoe, Surgeon to the New York Hospital, has published a paper in the *New York Journal of Medicine* for May 1858. He says:—

The description by Brodie of abscess in the tibia is very accurate and complete. His account of the disease, however, embraces only that form in which the abscess character is maintained throughout, and in which the suppuration, taking place within the substance of the bone, is there pent up, by the dense unyielding nature of the surrounding tissues, and in its slow and painful progress towards the surface, gives rise to the distressing symptoms he so well delineates, and is instantly relieved by the simple operation he recommends.

There are, however, a certain number of these cases, and Dr. Markoe suspects it is a majority, in which, with a similar commencement, a very different progress is observed; and in which the diseased actions, though quite as distressing and perhaps more tedious and intractable under ordinary management, present the features not so much of abscess as of its effects, not so much the characters of the primary disease as of its consequences or sequelæ. He refers to cases in which the inflammation of the bone begins as an acute attack, passing rapidly into suppuration, and in which the abscess thus rapidly formed, finds its way early to the surface, through the compact external shell of the bone, and is discharged, to the temporary relief of the sufferings of the patient, though, it may be, not greatly to his advancement towards a cure. From this point begins the marked difference in the progress of those cases which Brodie describes, and those to which Dr. Markoe wishes to direct attention. In the former, the abscess, once well open, goes on rapidly towards a cure. In the latter, the opening not being free, and probably not being direct, accumulations of matter take place within the cavity, and new inflammations and suppurations are excited in the bone substance surrounding the original focus of disease. New abscesses are thus formed, which either break into the original cavity, or discharge themselves upon the surface, by forcing their way through the compact outer layer of the bone. By the repetition of this process, the bone gradually becomes the seat of an inflammatory hypertrophy, and the patient is harassed for months by the constitutional disturbance and pain accompanying these repeated suppurations. After a time, varying in different individuals from a few weeks to many months, the disposition to the formation of new abscesses seems to cease, perhaps because all the cancellous tissue of the affected region has become involved either in suppuration or in hypertrophic induration; and the bone is left perforated in all directions by two, three, four, or more sinuses, generally all communicating with one another, and with a central excavation or chamber, which marks the position of the original abscess. From these openings is discharged, often in considerable abundance, a thinnish pus, sometimes offensive, varying in its quantity and quality with the condition of the patient's general health; which discharge, from the shape and position of the channels though which it comes, is indirectly and imperfectly evacuated, and by its retention keeps up and aggravates the chronic inflammation which is early set up in the surrounding bone tissue.

In this state, the parts may continue without alteration for an indefinite period of time, the disease not showing much disposition to make encroachments, but evidencing no tendency whatever towards improvement. The system gradually accommodates itself to the existence of the disorder, becomes accustomed both to the drain and the irritation, and the general health is often completely re-established. The diseased bone becomes an entirely local affection, only troublesome to the patient from the amount of pain and soreness he experiences in it, an amount which in different cases varies from a slight feeling of tenderness to constant and severe gnawing or boring pain, both conditions being occasionally interrupted by more or less severe attacks of acute inflammation, generally accompanied by an increase of suppuration and sometimes with severe constitutional disturbance. In this condition, the presence of the disease does not always interfere with a certain degree of use of the limb, and thus patients are sometimes willing to indure, for an indefinite period, the pain and inconvenience which attends it. We have, in such cases, an opportunity to learn the natural history of the affection, and may appreciate the amount of its tendency towards a cure, a tendency which existing fifteen years in one of my patients, and about sixteen years in another, had not sufficed, at the time of operation, to leave any evidences of reparation, much less of cure. Among diseases which do not tend to progressive disorganisation, this is a rare degree of obstinacy; and the reason of this intractability, and indisposition towards a cure, Dr. Markoe takes to exist, not so much in the nature of the diseased actions as in their unfavourable physical conditions. Thus, though the character of the inflammation in the bone may be perfectly simple and healthy, yet the resulting abscess has assumed the form of a deep cavity, communicating indirectly and imperfectly with the surface by means of narrow, ill-placed, and often tortuous canals. Such a condition of abscess in the soft parts is recognised as extremely unfavourable for the healing process; how much more so when, as in the bone, we have not only an unfavourable shape, but an unyielding wall, which deprives us entirely of the immense advantage which, in the treatment of similar abscesses in the soft parts, we derive from pressure in approximating the walls of the suppurating cavities.

This view of the local cause of the obstinacy of these cases of chronic abscess of the bone, is still further strengthened by several considerations. In the first place, there seems to be no necessary or usual connection of the inflammatory action with any constitutional vice, as scrofula, syphilis, or any other contamination of the general system. On the contrary, the affection seems to occur by preference in young, vigorous, and robust persons, and generally as the immediate consequence of injury, or of exposure to wet and cold, or of some other well-recognised cause of local disease. In the second place, the effect of remedies administered with a view to their constitutional or alterative effect, seems usually to be almost inappreciable in producing any curative change in the diseased part; and when any such favourable effect is seen in diminishing pain, or improving discharge, it is merely temporary, and the power of the remedy for good is soon exhausted. This was abundantly illustrated in three of Dr. Markoe's patients, in whom the disease had long existed, from whose previous histories, as well as from his persevering efforts in the use of remedies, he arrived at the conclusion that the cure was not to be accomplished, nor any important improvement secured, by any form of internal medication. Lastly, and in contrast with the inefficiency of medicine, the effect of the operation by which the physical conditions alone can be affected, seems to me the strongest proof that it is upon these physical conditions that the difficulty depends, a conviction which, he thinks, must force itself upon the mind of any one who has watched the beautiful reparative appearances which the wound presents from the moment of the operation, and the certainty and soundness of the cure which follows its thorough performance.

It appears plain to Dr. Markoe that the pathological anatomy of the disease is an inflammation of the cancellous structure of the ends of the long bones, rapidly terminating in suppuration. The matter thus rapidly formed, early approaches the surface of the bone, and soon perforates its outer compact shell, and then, without obstruction, reaches the surface of the integument and is discharged. The deep cavity in the bone, thus communicating with the surface by a narrow and generally somewhat indirect channel, is not properly evacuated, and the lodgment of pus in its most depending portions provokes anew inflammation and suppuration, which

extends the original excavation and usually finds its way to the surface by some new channel, and thus, by a repetition of the original morbid process, the disorganisation of the bone assumes the extent and severity with which it ultimately comes under our notice. These repeated inflammations cannot occur without exciting vascular action in the surrounding parts, and we have accordingly inflammatory hypertrophy induced in the affected portion of the bone, and later in the disease, induration and eburnation, particularly about the abscesses and their connecting sinuses. With this action in the bone, we have a corresponding chronic inflammation and thickening of the periosteum, with osseous deposits from its inner surface; so that the surface of the hypertrophied portions of bone, when stripped of their periosteum, have a rough, irregular, granulated appearance, in all respects similar to the surface of the involucrum in cases of necrosis.

The discharge, during the earlier periods of the complaint, varies in quantity and quality with the varying activity of the inflammation; but in the later stages, when the tendency to abscess formation is exhausted and the parts have become consolidated by chronic inflammation, the discharge is moderate in quantity, and in quality generally thin, sometimes sanious, and very rarely offensive. Caries of the walls of the cavities may occur, if the constitution be predisposed to scrofula or contaminated by syphilis; and, in the same way, necrosis of small portions either of the original compact, or of the morbidly indurated cancellous tissue, may take place, as an accidental complication of the case, but neither caries nor necrosis has anything to do with the original character of the affection, nor do they play any important part in its later history and progress.

A most important feature in the anatomy of these cases, is the disposition shown by these abscesses to approach and to involve the joint near which they are situated. This tendency in the mere chronic form of abscess, which has not been able to make its way to the surface, but remains a source of irritation pent up within the swollen end of the bone, is recognised by Brodie, and indeed by many other observers, and is justly considered one of the most dangerous features of the disease. The same tendency is observable even in the open abscess we are describing. Though there be no pent up fluid seeking an outlet through the joint, yet the tendency seems very strong for the excavations to extend to a very close proximity to the nearest synovial surface; and even when no direct communication takes place, the inflammation of all the tissues round the abscess easily spreads to the joint, and rather by its constant recurrence than by its immediate severity, seriously compromises its integrity.

The symptoms of this affection have been so fully described, in the sketch of its history at the commencement of this communication, as not to require recapitulation, but its resemblance to, and its diagnosis from necrosis, demands a moment's notice. The resemblance is striking and obvious. The age of the patients; the most frequent causes of the attack; the early symptoms of inflammation of the bone terminating in suppuration; the numerous and successive openings; the enlargement and induration of the affected region; the unchanging and intractable character and the interminable duration of the disease,—are all marks of identity, which, Dr. Markoe believes, habitually deceive careless and superficial observers, and which require, in order to a proper discrimination, much care and a thorough knowledge of the two diseases, and their distinctive characteristics. There are, however, some features which are diagnostic.

First, as to the situation of the affection; in necrosis the compact structure, and in abscess the cancellous structure, are respectively implicated. We have, therefore, necrosis ordinarily affecting the middle portion of the long bones which is mainly compact tissue, while abscess is formed at the enlarged extremities where the more vascular, and therefore more highly organised spongy, tissue predominates. In eight cases which he has seen there has been no exception to it.

Secondly, the actions set up in necrosis, particularly if a large portion of the calibre of the bone has died, are for the formation of new bone around the dead sequestrum, and consequently the enlargement is sometimes extremely great, from the thickness of the involucrum, which, it must be remembered, more than supplies the place, as far as mere bulk is concerned, of the bone destroyed. On the other hand, the actions which go on in connexion with abscess, are merely those of thickening of the surrounding bone, by a process of inflammatory hypertrophy, strictly analogous to the induration of the tissues round any series of chronic abscesses in the soft parts. The enlargement, therefore, which accompanies necrosis is very great, while that which exists with abscess is comparatively moderate. Dr. Markoe made some few examinations, with the assistance of Dr. W. H. Draper, microscopist to the New York Hospital, of several specimens taken alternately from a hypertrophied bone, and from an involucrum which was of entirely new formation, but no difference could be detected by the microscope, sufficient to be of diagnostic value.

Thirdly, the early history of these cases of abscess of bone shows, that with each opening formed, there is usually a piece of bone cast off, in a few days or weeks after the opening takes place. This does not occur with the abscesses of necrosis; and it appears to me that the explanation of the difference between the two affections in this respect is not difficult. Where suppuration occurs within the substance of bone, it may well be supposed that the rapid course of the matter towards the surface, bursting as it were through the outer shell, before the slow action of the osseous vessels can provide by absorption for its quiet transit, will or may in many cases produce the death of a small portion of the compact tissue which offered the first resistance to its progress; which small fragment, thus killed, will separate and make its appearance in a longer or shorter time after the opening of the abscess. In necrosis, on the other hand, all the compact tissue implicated dies in mass, suppuration occurs outside of it, and between it and the periosteum, and no separation of fragments can take place, until the whole mass begins to loosen from its attachments, and not then except some violence has been used to loosen them. The pieces which come away are described as being very small, and are often likened to a finger nail; and Dr. Markoe has so frequently met with them in the history given him by the patients of their earlier sufferings, that he cannot but consider them as very characteristic.

Fourthly, Dr. Markoe thinks there is generally less pain, less inconvenience, less inability and less discharge produced by the abscess in its chronic condition, than by the necrosis while the sequestrum is present. So much so is this the case, that it must be extremely rare for a man with a large sequestrum in his tibia, for example, to be able to be about his ordinary occupations with the same degree of comfort, as is often enjoyed by those affected with chronic abscess.

Lastly, the most important of all the diagnostic signs is derived from the information given by the probe. In necrosis there is usually no difficulty, if the openings are free, in finding the bare and rough surface of the sequestrum. In the abscess, on the contrary, with openings equally free, through which the probe finds its way easily into the substance of the bone, no bare bone is discovered, or if any appears to be touched, it is so slight and uncertain in its indications as to leave us in doubt whether the sensations may not be produced by the rude use of the probe, rubbing off the granulations from the surface of otherwise healthy bone.

From the view which has been presented of the anatomical features of this affection, the character of the operation necessary for its cure is directly deducible. If the difficulty lies essentially in the physical conditions of the parts, then these physical conditions must be altered. If the abscess lies deep from the surface, it must be freely exposed to that surface, and made, as nearly as may be, a part of it. If the channels through which it is discharged be narrow and indirect, they should be made large and direct. In short, if the obstinacy of the affection depends upon its character as a sinuous abscess, that character must be as completely as possible destroyed by converting it into an open wound. In carrying out this indication, it must be remembered that it is a cardinal one, and that upon the thoroughness with which it is done, will depend the rapidity and completeness of the cure. The diseased bone is so much more inaccessible when situated in the muscular mass of the thigh, and the operation necessary for fully and freely exposing it is so serious and extensive, that he fears, in most cases, it would be left incomplete, and therefore ineffectual. Besides, even if the operation be well and thoroughly done, the suppurating cavity in the bone is so covered in by thick soft parts that, by their healing, it in a very short time approaches again to the character of a cavity with narrow outlets, and tends to reassume the appearance and behaviour of a sinuous abscess. When, however, the operation can be thoroughly done, as it can in the tibia, and in most of the other long bones, and when in addition all the fistulous tracks can also be freely laid open, by following them carefully with the chisel and gouge, the cure of the diseased condition will be speedy and complete.

It is usually best to commence the operation on the bone with the trephine, and particularly in old cases, where, from long and frequent inflammation, the osseous tissue is much consolidated. After freely exposing the main cavity by the trephine, then with the gouge, the whole of its anterior wall, and such other parts as may seem necessary, in following up the fistulous tracks, may be chiselled away. It is very desirable to have the tourniquet applied to the limb above, not so much for the saving of blood, of which there is usually but little lost, but with the view of keeping the cut surfaces of the bone clean, that we may be able to judge correctly of the course and condition of the various tracks which it may be necessary to follow. As far as practicable, there is no doubt that it is best to follow up and lay open each of the sinuses which lead from the central cavity to the surface. But this is not absolutely necessary; for sometimes sinuses which penetrate the bone quite far back, when left untouched, nevertheless heal rapidly and soundly, as the rest of the wound begins to fill up. If the principal part of the operation be thoroughly done, this will probably be usually the case with any sinuses which may be allowed to remain. In any case where it seems necessary, no hesitation need be felt in making extensive and deep chisellings of the bone, for the repair is abundant and certain; yet, at the same time, it is well to avoid weakening the bone, by removing its compact substance transversely, as we never can be certain that, by some mischance or misbehaviour of the wound, or of the constitution, the reparative actions may be delayed or imperfect.

The after treatment is usually the simplest possible. By light dressings of the wound, which is of course left wide open, it granulates from the bottom, and generally begins to heal at its edges before the excavation is filled up. No tents, or sponges, or deep dressing in with lint, will be required, and time only is necessary to complete the cure. As soon as the wound has fairly begun to fill up, and to contract, if it be in a healthy condition, the patient had better be allowed to go about with a roller bandage to support the limb, that he may secure the benefit of air and exercise. If an unhealthy condition of the sores should persist, or if caries of the bone should be suspected, constitutional treatment will of course not be neglected; but in most cases, when the operation has been well done, nothing further will be required to restore the patient to perfect health.

REMOVAL OF STONES FROM THE URINARY BLADDER.

In the *Glasgow Medical Journal* for July 1858, Dr. A. Buchanan gives an account of some trials made by him to facilitate the removal of calculi from the urinary bladder. The two methods which he describes are extrusion with the fingers, and the landing-net.

Extrusion with the Fingers. The first method is, perhaps, more curious than useful. He found that after making the usual incision, according to the rectangular method, it was quite possible to remove certain stones with the fingers alone, without the aid of any instrument whatsoever. Stones of a spherical shape and smooth surface, like marbles, even though of large size, could readily be so removed; but to stones of a different shape, and of rougher surface, this method was found to be inapplicable, unless the opening in the bladder were of large size. The following remarks will render the mode of manipulating easily understood:—

The forefinger of the right hand, introduced into the bladder through the operation wound, readily reaches the stone, and has it so much under command, that it can easily be brought down into the triangular space at the neck of the bladder, and placed there so that its longest diameter—if it be not spherical—may be parallel to a line at right angles to the middle of the incision of the bladder. This is the position most favourable for the extraction of the stone, and by the pressure of the forefinger it can be retained steadily in that position. Holding it therefore firmly, the fore and middle fingers of the left hand are introduced into the rectum, and passed up beyond the prostate, when, upon pressing them forwards, the stone is distinctly felt by them; and it is so firmly grasped between these two fingers and the forefinger of the right hand, as irresistibly to suggest to the mind the attempt to extrude it from the bladder, by means of the two fingers of the left hand pressing it from behind, while the forefinger of the right hand guides it outward, and regulates the direction of the pressure.

In this way, as stated above, smooth and spherical stones are readily removed, but only these, unless with a larger incision than usual. The process is therefore of such limited utility, that it would not have been worthy of the space the description occupies, had it not been that to bring the stone and fingers into the positions just described is often an important preliminary to other methods of extraction;—as to that next to be described, and to the ordinary method of extraction with the forceps—if it be the latter, instead of grasping through the bladder to find the stone, and attempting to seize it in whatever position it lies, the forceps is at once laid over the stone in a known position, and the stone is thrust between the blades by the fingers of the left hand, and laid hold of in the most advantageous direction; that is, with its long diameter parallel to the blades.

Landing-Net. The great majority of stones cannot be extracted by the fingers alone, but require the aid of an instrument. Of various instruments for the purpose which Dr. Buchanan had constructed and tried, the one which seemed to him to answer best the ends for which it was devised, he named a *landing-net*, from its resembling very much, in its mode of operation, the tackling of the same name, with which the angler secures the fish he has hooked and brought to the water's edge. He had this instrument first made with a single handle, and an oval elastic rim of whalebone, to which the net was attached. But finding this not to answer well, he returned to a construction differing only from that of the common forceps, furnished with a net, in the modifications to which he subjected it. The handles are in no respect different, but the blades have altogether changed their character, as they are no longer intended to grasp the stone, but merely to open and shut the mouth of the sac which is attached to them. In conformity with this new destination, they are rounded and attenuated, so as to resemble stout stocking-wires. They are curved, so as to form together, when closed, an oval orifice to the sac; and they terminate in two rounded knobs, like peas, which prevent them from doing any injury when they are introduced into the bladder, or when opened and shut within it.

An instrument of this kind lays hold with great facility of stones of the size of those usually met with in the bladder. On placing the mouth of the instrument over the stone, and making downward pressure, the mouth tends to open spontaneously to admit the stone; and next, the hand holding the instrument, which had at first yielded to, and gently assisted the distending force, now closes the mouth, so as to include and secure the stone within the sac. In this way, without any further preliminaries, a stone may be laid hold of within the bladder, the metallic knobs detecting the place of the stone; and these knobs being carried to the farther side of it, the mouth of the sac lies over the stone, and, on downward pressure being made, will open to receive it. This method, however, is far inferior in precision and facility of execution to the following method, which he recommends in preference:—

Place the stone and the fingers in the positions recommended for the process first described; that is, the stone lying immediately behind the opening in the bladder, with its long diameter at right angles to the direction of the opening; the index finger of the right hand introduced through the wound, and resting on the stone, and the fore and middle fingers of the left hand in the rectum, ready to press upon the stone from behind. Let the finger of the right hand be now withdrawn, and the instrument introduced in its place. The stone is now pressed by the fingers of the left hand against the two wires forming the mouth of the sac, and there separating, the stone is forced into the sac itself, and secured by the shutting of its mouth. The two slender wires of the sac add little to the bulk of the stone, so that any difficulty experienced in extracting it can depend only on a disproportion between the size of the wound and the stone which is to pass through it; and if that cannot be overcome by address and moderate traction, it must be met by the enlargement of the wound.

GANGRENOUS ERYSIPELAS OF THE SCROTUM.

Dr. Christopher H. Fleming reports the following case in the *Dublin Hospital Gazette* for August 15th.

James Feeney, aged 45 to 50, a labouring man, lately serving as a private in one of the temporary Irish militia regiments, applied at hospital, on July 10th last, with difficulty in micturition, and swelling of the penis and scrotum. He was evidently a man much shattered in constitution. He had a wan, sallow

look, and had laboured under symptoms of general anasarca some four or five years back. About three days previous to his application at hospital he observed, without any assignable cause, some fulness of the scrotum. It increased, and involved the penis; and he remarked that his urine escaped slowly, and in limited quantity. He did not suffer much pain; in fact, he had a sort of muddled, apathetic look, which would almost presuppose insensibility to pain. The integuments of the penis were found œdematous, the prepuce being so distended and distorted with serous infiltration as completely to overlap the glans, and pass considerably beyond it. The scrotum was swollen, hard, and tense, and had scattered over it, inferiorly especially, patches of purple ecchymosis, with marks intervening of old cicatrices; an erysipelatous blush was also visible both over it and the penis; and even over the region of the pubes there was a good deal of unnatural fulness. It was now ascertained that the man had an attack in the scrotum, much like the present, about three years back, in connexion, as it would appear, with gonorrhœa, and that some suppuration and sloughing was the result of it. With those local symptoms, a considerable amount of low fever was present; his pulse was remarkably feeble, and his prostration was extreme. He was at once admitted into hospital. When placed in bed, an additional complication was discovered in shape of ascites, and considerable enlargement of the spleen. The heart-sounds and lung-sounds were tolerably healthy; some few bronchial râles being alone traceable in the bases of the latter.

The special condition of the scrotum was now carefully investigated, and the isolated character of the swelling ascertained. The whole could be satisfactorily raised up, as if *en masse*, from the penis. The perinæum was perfectly normal, and the entire tract of the urethra was equally free from any implication in the swelling. There was no appreciable distension of the bladder above the pubes, and when the orifice of the urethra was hit off, a full-sized catheter passed with ease, giving exit to only a small quantity of urine, very deep in colour, and with acid reaction.

The diagnosis and treatment of the case were now quite obvious. Incisions were freely made in those portions of the scrotum which presented the ordinary characters of incipient gangrene, the requisite cautions were adopted in the after-dressings, and stimulants were liberally administered. Next day, without any very remarkable increase in the severity of the constitutional symptoms, the local had greatly extended, patches of sloughy scrotum occupied the lines of the incisions made, and little or no discharge escaped. Along the cord and inguinal canals on each side, a general fulness was manifest, reaching towards each lumbar region; a blush of redness, a mere blush, marked its course; and in the region of the pubes both were specially evident. For two or three days these local symptoms advanced, the constitutional being in a great measure stationary, when a gradual subsidence of the swelling over the pubes and along the right inguinal region took place, the sloughs of the scrotum shewed a disposition to separate, and the general swelling to subside, whilst all the local signs of inflammation increased on the left side, the breadth engaged advancing so much as to occupy a space extending from the umbilicus along the line of the linea alba, to the corresponding groin and lumbar region.

On July 19th, the ninth day after his admission into hospital, a mere trace of inflammation was visible along the right side. That over the pubes had disappeared; and the sloughs had all but separated from the scrotum, exposing extensive granulating surfaces investing the testicles. On the left side, all symptoms had advanced; and a prominent bulging, with distinct fluctuation of air, mixed with fluid, was visible about midway between the loins and the pubes. Here a free incision was made, which gave exit to a large quantity of sanious pus, heavy in smell, and loaded with air-bubbles, and particularly copious when pressure was made from the direction of the lumbar regions. Next day an immense cake of soft slough presented itself at the wound, and was removed. Without further particularising the progress or treatment of the case, it may be stated, that rapid improvement took place, both in the local and general symptoms; and that, as regards its surgical aspect, full convalescence may be said to be established, the skin of the scrotum having surprisingly accommodated itself to the loss it sustained, and cicatrisation being now almost fully completed. His medical disease is stationary; indeed, any change is rather for the better.

Remarks. The above case of erysipelas suggests many practical reflections, not the least important and interesting of which is that of the successful issue of the curative processes set up by nature, notwithstanding the complications with a disease supposed to influence materially the healthy constituents of the blood. The apparently idiopathic character of the attack is another feature worth noting. Idiopathic erysipelas seldom presents itself in the scrotum; and the recurrence of the attack would appear to confirm its nature in the present instance, as recurrence is by no means rare where idiopathic erysipelas is most frequent, such as in the face and scalp.

The last practical point, and not the least valuable, connected with the case, is the remarkable similarity between the local symptoms which were present, and those usually met with in cases of urinary abscess or extravasation of urine along some part of the tract of the urethra. The analysis of the symptoms detailed in this case, both local and general, will at once point out the great necessity of endeavouring to isolate those symptoms, in order to form an accurate differential diagnosis. Great assistance was derived from attention to the state of the urine throughout.

British Medical Journal.

SATURDAY, SEPTEMBER 25th, 1858.

THE FIRST OF OCTOBER.

The first of October—the commencement of the medical year—is once more at hand. Nothing very remarkable in this, one might say; nor indeed would there be, if that day in the present year merely inaugurated the periodical return of a time-honoured system, in all its integrity and with all its defects. The usual good advice to students, and the extolling of each and every branch of medical learning, would be nearly all that would be expected on that day from the censors of the profession and from the teachers of medicine. Yet, even in this its most commonplace form, the first of October must have ever been a day of expectation to the student, and to the practitioner one of remembrance, tinctured with such feelings as the retrospect of his student-life shall have dictated.

But this forthcoming first of October brings with it something new—something that will make it a day to be remembered of the medical profession for a long series of years. On that day will come into operation the new Medical Act—an Act which, whatever be its shortcomings, will collect the scattered sheep of the profession into one fold, and put on them—as far as law can do so—a mark by which they may be known from pretenders; will lay the foundation for a gradual but thorough reorganisation of medical teaching and licensing; and will, in great measure at least, release the duly qualified practitioner from the operation of narrow privileges restricting his sphere of action.

Great as has been the obligation of the student to render himself a worthy member of the profession which he has embraced; great as has been the responsibility of medical teachers in suitably training the sons of Æsculapius committed to their charge in the way in which they should go; this obligation and responsibility will now be increased, and must be henceforth steadily kept in view, if the profession of medicine is not only to be included within a protecting wall raised by the law, but is to shine forth to the world as one of the purest, noblest callings to which man can apply himself. In the abstract, the calling of the medical man is pure and noble—nothing can make it otherwise: it is only the faults and failings of those who follow it, that invest it with a cloud

which obscures its purity from the vulgar eye. In its new and prominent position, how much the more necessary to remove the cloud, so that the sacred light may be seen by all, and distinguished as the one true light of the healing art!

We may now ask, Is there any hope that medicine will grace as well as occupy its exalted position? The question may be answered in the ethical and in the scientific sense—meanings separate, yet shading into each other by indistinguishable gradations.

On the ethical answer, not much need be said in this place. It is a matter that must be left to the conscience of each individual practitioner and student. If, on each day, he can satisfy himself that he has, as far as able, carried out the command to "love his neighbour," and "to do to all men as he would that they should do to him," he may rest in the assurance that *he* has done nothing—at least wilfully—to increase the obscurity of the cloud which we have described as overshadowing medicine; and perchance he has done something to remove it. But it is well even if he have not increased it—for it exists only by accretion, and, if not supplied afresh, must in course of time be dispelled.

But what of medicine as a science and an art? Unless its followers exert themselves strenuously, and every day remove the mist of ignorance which enshrouds the lamp of pure knowledge, the people will continue to run after the charlatan as readily as after the medical man, and the law will have hard work to make them believe that that dimly burning light of medical science is the only safe guide, and that all others are *ignes fatui*. And here, especially, lies the responsibility connected with that career of teaching and of learning which commences on the first of October—a responsibility to which not a few are already awake, and the recognition of which is even now beginning to have effect.

If we would have a science, and the art founded thereon, to become more and more pure, we must direct our studies in the way which our present acquaintance with the science points out to us: if the way be one of theory, we must theorise: if it be one of observation, we must investigate and observe. Medicine is essentially a science of facts. We say *essentially;* because, as all the facts are not yet known, medical men have from time to time adopted—and rejected—theories, or rather hypotheses. But the store of facts in medicine is gradually accumulating, and has already, indeed, increased to such an extent as to render the teaching of medicine necessarily more and more practical, and to show that things, not words *en masse*, form the material with which the student's mind must be supplied. Our teaching and examining bodies are beginning to recognise this fact; and it has been arranged by the examining boards, from which the practitioner in this country ordinarily obtains his testimonials of qualification to practise, that in future more attention must be paid to the study of *things* than has hitherto been the custom. This determination is a step in the right direction. We hope it will be properly and judiciously followed out; for it is of the knowledge of existences, not of fleeting words or shadowy phantoms of the imagination, that medicine is to be built up. The more medicine is made to partake of the real, the more brightly will it shine, and the more obvious will be the distinction between the qualified practitioner and the ignorant pretender.

The law henceforth gives protection to the medical profession. But that it should be worthy of that protection and of the esteem and respect of men, rests with no human law. In the words of the late President of the American Medical Association, Dr. Eve, "we should become a law unto ourselves, or rather act above all law except the divine; since it is quite certain that we alone must protect the honour of the medical profession."

THE WEEK.

The correspondence which we publish at page 817, shows that the remonstrance, addresssed by Dr. Barker and his colleagues in the staff of meteorological observers to the Registrar-General, has not been attended with success. The remonstrance was, as will be seen, signed by nearly all the gentlemen who, at a cost of much time, labour, and expense, furnish the observations which form the basis of the valuable meteorological returns contained in the *Quarterly Reports*. The reason assigned for refusing to comply with the wishes of these gentlemen is, the reduction of "expense occasioned by the lavish gratuitous distribution of government publications"; and the hope is expressed that the "expenditure of the small sum" of one shilling and fourpence, in purchasing the quarterly returns each year "will not deter the observers from continuing their useful labours." Not one of the meteorological observers, we are convinced, would grudge the sum of sixteen-pence a year for the purchase of such valuable documents; but the matter becomes simply one of self-respect, and no one can be surprised that they should give broad hints of their intention to discontinue supplying the results of their labours to the Registrar-General, if they are to be denied an act of ordinary courtesy for the sake of saving a small sum of money. "Lavish gratuitous expenditure" might be reduced without offending common justice and civility.

The Quarantine Buildings at Staten Island, New York, have been lately burned down by a mob, among whom are said to have been many well known citizens of the island. The medical officers, Drs. Thompson and Bissel, were obliged to retreat. The mob, it appears, deliberately removed the sick from the shanties, and placed them about two hundred yards from the fire. Next morning, many were lying on the grass; some had been removed to the prison-house, the only building left standing. It is said that no lives were lost,—and it is a question whether some of the small-pox and yellow fever patients were not really benefited by exposure to the air. However much the means employed by the Americans to get rid of a quarantine establishment situated among a population of 20,000 may be disapproved of, their motives must be justly appreciated.

Association Intelligence.

BRANCH MEETINGS TO BE HELD.

NAME OF BRANCH.	PLACE OF MEETING.	DATE.
South Midland. [General Meeting.]	Town Hall, Wellingborough.	Thurs., Sept. 30th, 1 P.M.
Bath and Bristol. [General Meeting.]	White Lion, Bristol.	Thurs., Sept. 30th, 6.45.

Reports of Societies.

AMERICAN MEDICAL ASSOCIATION.

The Eleventh Annual Meeting of this Association was held in the Smithsonian Institution, Washington, commencing on Tuesday, May 4th, and continuing till Thursday evening following. The Association is composed of delegates from the several medical bodies in the United States. About five hundred delegates were present, making the meeting one of the largest ever held. The Chair was taken by Paul F. Eve, M.D., of Nashville, Tennessee, who, after the transaction of some necessary business, delivered an address, of which we give a portion.

PRESIDENT'S ADDRESS.

Congratulating the Society upon the favourable circumstances under which it met; in a hall dedicated by a generous foreigner to the promotion of science; in the presence of that towering monument designed to commemorate the worth of him ever enshrined in the hearts of his countrymen; surrounded by the glorious recollections constantly associated with this government; and before the great men and assembled wisdom of the nation; it becomes us, Dr. Eve said, to discharge the important duties which have called us together, with honour to ourselves and benefit to our profession.

The rise, progress, and present condition of this Association, he reviewed in a few words. The purposes of the Association were set forth, the manner adopted to accomplish the desired ends were stated, and the results of the ten yearly meetings were summed up. In doing this, the President recapitulated the subjects of the various works which had appeared in its published *Transactions*. Referring to these as an index of the varied contributions of the profession to the progress of medical science, he considered that they were a sufficient answer to the taunting questions asked in 1820, "What does the world yet owe to American physicians and surgeons?" (Sydney Smith, in *Edinburgh Review*.) In 1854, the editors of the Association Medical Journal, in speaking of these *Transactions*, replied most honourably to the sneering demand of their countryman, giving great praise to the scientific and practical manner with which the various reports of committees were performed. Upon such disinterested evidence, such full, free, and candid confessions, and from such a source, may rest the claims of the American Medical Association for proof of the benefits it has conferred on medicine. A most active and powerful agent in disseminating useful medical knowledge on this continent, it is highly probable that no similar institution has ever been more successful in carrying out its chief object—the promotion of science—than the one now assembled in this hall.

It has done something, perhaps all it could under the circumstances, to elevate the standard of medical education. An influential motive, calling forth this organisation, was the proposed attempt to correct the defects in the plan of instruction, and conferring the degree then generally adopted in our medical colleges; and one of the first resolutions passed, even when the profession had assembled in convention, was the creation of a committee to report at an early day on these exciting subjects. Improvement in the system of teaching medicine, and a change in the power granting the diploma, if not reformation in the schools, have ever since agitated the profession, and consumed a considerable portion of the time of our sessions. The only power to control the economy of the colleges which this body possesses, is exclusively moral, advisory, or recommendatory, and not legislative or legal; and while it may be true that no set of resolutions presented by the several committees have been fully carried into effect, still it cannot be denied that important changes calculated to advance medical education have been made. At least seven professors now compose the faculty in all the American schools, the one or two exceptions to this being in those in which the science is taught nine consecutive months. Not less than a period of four full months' instruction now constitutes a course of lectures, and even this is exceeded in most of the institutions. But one annual course is now delivered, with scarce an exception; and an interval is thus allowed for reading or private instruction. The Association has clearly defined what shall be taught. It has inquired into the practical operations of all the colleges in the land; scrutinised the general condition of medical teaching in every state; compared it with that of the most enlightened nations; called attention to preliminary education, and declared what it ought to be; advised higher requisitions and a more rigid examination for obtaining the degree; and has, by its free discussions and oft reiterated expressions in regard to the business of teaching and regulating the schools, undoubtedly prevented greater abuses. It has never ceased to urge at every meeting the pressing necessity for a more thorough preparation and greater attainments in candidates for the honours of the profession.

This subject, gentlemen, is one upon which you will be called to take action. A committee, chosen at Nashville, is to report here on medical education. It is composed of gentlemen from different sections, who, while familiar with the systems of teaching medicine in our country, are yet disconnected from all the colleges. It would seem to be a desirable object to settle at this meeting the future relation of the schools to this Association. Our sessions then might become less educational in character, and hereafter more scientific. And at the present stage of our proceedings, after all that has been said and done on this subject, the time has surely arrived for a decision. I cannot believe the colleges have any interested motives before this body; they of all others should be the last to oppose a more thorough cultivation of medicine, and ought by such a course to become unworthy of their trust, and unwelcome members of a great national congress of physicians, whose grand design is to promote medical science. We have now reached a period in our history when this voluntary Association is to determine what medical organisations, be they state, county, or city societies, hospitals, boards or schools, are entitled to be represented in its meetings. It alone can, of course, prescribe the requisitions for its own delegates. If created to improve and advance medical education (and this is in accordance with its own expressed declaration), then it is quite certain the schools must be controlled. It has but to speak on this point, and it will be obeyed; for it is now too late for any physician to oppose, or any medical college to set at defiance, the moral power of this body.

As to the first object of an ethical nature over which the Association designed to exert its influence, that of enlightening and directing public opinion in respect to the duties, responsibilities, and requirements of medical men, we are free to confess little or nothing has been done. Nor is there much probability that any great change will soon, if ever, be effected. The work itself, in the very nature of things, is utopian. How is it possible to enlighten or direct the public mind on the economy of a science which it practically denies to exist? We ought to recollect that the time has not long passed since grave professors in our colleges signed certificates recommending nostrums; or what was done even last year in London, at Middlesex Hospital, by its regular surgical staff? these reminiscences, however unpleasant, may serve somewhat to moderate our indignation against those who would insult the profession, or who entertain a very low estimate of the scientific acquirements of physicians, even at the present day. The profession must first fully comprehend its duties and responsibilities, and the proper and special qualifications for the practice of medicine, before any attempt can succeed to get the public to appreciate what these are, or acknowledge the ethical impropriety of employing secret remedies. If we make no distinction between the regular and irregular practitioner, between the physician and the proprietor of a nostrum, we are alone censurable that two such opposite characters are so generally confounded by the community. Until we are more honest, more united, truer to ourselves and our calling, and cultivate a proper *esprit de corps*, in vain is it to expect a change in public opinion regarding medical science. To prevent disease or relieve the sick is a most benevolent and honourable vocation, and when one conceals for selfish ends a valuable medicine, he ceases to be honest and is void of philanthropy; for, by attempting to place a moneyed valuation upon pain and life, he becomes a trader in human physical sufferings; he estimates in dollars and cents the groans and tears of his fellow-creatures. He may profess what he pleases, but his piety is not of the Bible, and has not a jot or tittle of Christianity about it, for that teaches us to love our neighbours as ourselves. Eschewing politics, and seeking no aid from state or church, we should become a law unto ourselves, or rather act above all law save the divine, since it is quite certain we alone must protect the honour of the medical profession. And, thank God, standing this day, the proudest of my life, before this goodly assembly, and at the capital of our common country, I can announce that here, to the American Medical Association, it may with safety be for ever confided. By its recent acts, proclaimed throughout the length and breadth of this wide domain, this body has denounced all fellowship with

irregular practices, and erected a barrier impassable to honour and respectability.

Having learned wisdom from a more careful examination of the statistics and results of deformities after fractures, the question occurs if we have not ourselves unwittingly made patients expect too much from remedial agents. Disease in itself is a destructive process, which we can only prevent or relieve; and as, of course, we cannot create or restore, should we not, therefore, be more chary of the little word "cure"? The monument erected to Ambroise Paré, the father of surgery, bears the modest inscription, in reference to the wounds he treated, "*Je les pansay et Dieu les guarit.*" Empirics may boast that they cure, and doctors of divinity may sustain them, but the physician knows that it is God who healeth all our diseases.

On that branch of ethics which relates to ourselves—that of encouraging emulation and concert of action among physicians, and fostering friendly intercourse in the profession—the Association has been eminently successful. It has far exceeded the most sanguine expectations in overcoming all opposition; in creating an admirable code, now adopted everywhere; in organising State, County, and City Societies; in bringing together physicians from the remotest parts of our immense territory; in awaking the whole profession to its true interests; and in blending us into a common harmonious fraternity. Without law or authority, but by moral suasion, have we been united as one man, and possess this day the power to be felt over this entire continent. There never has been a more propitious period for medicine in America; never greater evidence of vitality and extended usefulness in our ancient and benevolent calling; never better feeling or more confidence of success than now by our united effort to do good in the great cause of suffering humanity.

We have seen, gentlemen, how much this Association has achieved in its infancy to elevate honourable medicine. A wide field for scientific investigation is before us; much territory still remains to be redeemed; the wilderness is yet to blossom as the rose, and the leaves to be gathered for the healing of nations. The hygienic condition of the nation, of such immense interest to our people—that first, all-important question, ever before the profession—the prevention of disease—is to be improved. We are to search after truth, and when found, it is to be generously applied for the good of mankind. The work is a self-sacrificing and benevolent one, but it is grand and sublime, even god-like; for it has to do with pain and disease, life and death; and we rejoice to know that, whenever or wherever called upon, the members of our profession and of this Association have never failed in any duty, and have been faithful to the end. Yea, many of them have stood alone between the living and the dead, and cheerfully laid down their lives to stay the pestilence and destroyer.

The very waters at our feet, as they sweep onwards to the ocean, pass in sight of a city where three years ago no less than four-fifths of our profession in that community, swelled, too, as their ranks had been by volunteers from this body, fell manfully contending with disease and death; and on a late occasion, when one of our steam-packets, having been injured by a collision, went down in an instant, carrying every soul on board into the depths of the ocean, among the passengers was a member of this association. To the inquiry, Where was he during the heartrending scenes of a sinking ship, freighted with human lives? promptly came the affecting and sublime eulogy from one who knew him well, that so long as a woman or child remained unprovided for, he never left the ill-fated *Arctic*. How near akin was his gallant spirit to that of him who, during a subsequent and similar occurrence, after seeing every woman and child committed to his care safely rescued from his foundering bark, after sending the last parting message to his family, and discharging every duty without one lingering ray of hope, calmly assumed his commanding position on the deck of his vessel, and as she glided from under him into the yawning billows, instinctively uncovered to meet his fate and his God. While the wild waves are sighing a requiem over the unseen burying places of these illustrious dead, the benedictions of a grateful people are continually ascending over the forty graves of the martyred heroes of Norfolk. These were our companions, who died in the noble service of that calling, to promote the best interests of which has assembled us together.

Gentlemen of the American Medical Association, we have convened for important purposes; great events are before us; the interests of humanity are here; the hopes of the profession are in this meeting; the eyes of the medical world are upon us. May we then so act in view of surrounding circumstances, that "the skill of the physician shall lift up his head, and in the sight of great men he shall be in admiration."

On motion, the thanks of the association were voted to the president for his able and instructive address, a copy of which was solicited for publication.

PRIZE ESSAYS.

Dr. Grafton Tyler, Chairman of the Committee on Prize Essays, reported that three essays had been received, and that two of them were each worthy of a prize. They also highly commended the third. The Prize Essays were:

1. An Essay on the Clinical Study of the Heart-sounds in Health and Disease. By Austin Flint, M.D., Buffalo.

2. An Essay on Vision, and some of its Anomalies, as revealed by the Ophthalmoscope. By Montrose A. Pallen, M.D. of St. Louis, Missouri.

By desire of the members present, Drs. Flint and Pallen each gave a brief synopsis of their essays.

INVITATIONS.

Invitations were received, and accepted with thanks, from Captain Meigs, U.S. Engineers, to visit the Capitol at Washington, with a view to examine its ventilation; from Dr. C. H. Nichols, to visit the Hospital for the Insane of the United States Army and Navy and of the State of Columbia; and from the Reverend B. A. Maguire, President of Georgetown College, to visit that institution; etc.

MEMBERS BY INVITATION: HONOURABLE RECOGNITION OF A BRITISH NAVAL MEDICAL OFFICER.

In accordance with the rules of the Association, several gentlemen were elected "members by invitation", and invited to participate in the proceedings.

On motion, Assistant-surgeon Frederick A. Rose, of the British navy, who nobly volunteered his services on board the United States ship *Susquehanna*, at Port Royal, and who came in her to New York, devoting himself to the sick crew, was unanimously elected a "member by invitation", and invited to take a seat upon the platform. [It was supposed at the time that Dr. Rose was in the city, but it was ascertained that he had left.]

ELECTION OF OFFICERS.

After some other business had been transacted, the officers of the Association for the coming year were elected. The nomination is made by a committee, consisting of one delegate from each state represented at the meeting. On the present occasion, the following gentlemen were recommended, and elected by the meeting, to fill the several offices: *President*, Harvey Lindsley, M.D. (Washington). *Vice-Presidents*, W. L. Sutton, M.D. (Kentucky); T. O. Edwards, M.D. (Iowa); Josiah Crosby, M.D. (New Hampshire); W. C. Warren, M.D. (North Carolina). *Secretaries*, A. J. Semmes, M.D. (Washington City); S. S. Bemis, M.D. (Louisville, Kentucky—the place fixed on for next year's meeting). *Treasurer*, Casper Wister, M.D. (Philadelphia). The President-elect was conducted to the chair by a committee of three members, and was introduced by the retiring President.

VOTES OF THANKS.

The thanks of the Association were voted to the retiring officers for the able and impartial manner in which they have discharged the duties of their respective offices; and, with the ex-presidents of the Association present, they were invited to take seats on the platform.

MEDICAL ETHICS: NOTICE OF MOTION.

Dr. Thos. P. Atkinson (Virginia) submitted the following resolution:

"That the Constitution of this Association be so amended as to provide that no individual who shall be under sentence of expulsion or suspension, from any state or local medical society of which he may have been a member, shall be received as a delegate to this body, or be allowed any of the privileges of a member until he shall have been relieved from said sentence by such state or local society."

The President decided that, under the constitutions, amendments to it must lie over one year; and the resolution was accordingly laid on the table, for consideration at the next annual meeting.

REPORT OF COMMITTEE ON AMERICAN MEDICAL LITERATURE.

The following is an extract from theReport, which was read by Dr. Palmer:—

The periodical literature of the United States is regarded as possessing great abundance, variety, richness, and general excellence; and, though still possessing defects, is constantly

improving. Many of the contributions are of great weight and value, indicating an enterprising and industrous profession. Serious defects are regarded as existing in the review department, arising mainly from the fact that the income of the journals will not justify pecuniary disbursements for literary labour, and editors necessarily engaged in other pursuits cannot command the time, if all possessed the ability, to do the work thoroughly and well.

A few well supported journals in place of the many, but ill sustained, might tend to correct this evil; but the multiplicity of local journals is considered as peculiarly beneficial, by collecting from a greater variety of sources a larger number of facts, and developing the powers of a larger number of writers.

The number of original American medical works is increasing, and their character is improving, and, in some respects, particularly in practical utility, they will not suffer in comparison with those of Europe; yet serious imperfections exist, and great improvements are demanded. Great and permanent improvements in medical, as in general literature, must be gradual, depending more upon the advancement of education, of taste, and intelligence, than upon any specific measures which may be adopted. Still, various particular measures, such as the permanent writing of medical theses during professional pupilage, and keeping systematic records of cases when in practice, would do very much in hastening an improvement. But for the greater perfection of our literature, we must wait the further development of our country, and for those changes of time and circumstances which shall produce a larger number of devoted savans and scholars, placing them in situations where a variety of absorbing pursuits shall not prevent the concentration of great talents upon a comparatively limited range of subjects.

On the subject of the reprint of foreign works, it is held that, while the free circulation of the best class of these works among us increases the knowledge and improves the taste of the masses of the profession, it does not interfere with the production of the higher order of original works; and that the moral obligation of our government to join with Great Britain in the enactment of an international copyright law is by no means clearly established.

REPORT OF COMMITTEE ON MEDICAL EDUCATION.

Dr. James R. Wood, chairman of a special committee on medical education, made a report, discussing—1st, primary medical schools; 2nd, the number of professorships in medical colleges; 3rd, the length and number of terms during the year; 4th, the requisite qualifications for graduation; 5th, such other subjects of a general character as to give uniformity to our medical system. The committee arrived at the following conclusions:—

1. Primary medical schools should be encouraged; but, as office instruction will continue to be sought by students, practitioners should either give them necessary advantages of demonstrations, illustrations, and recitations, or if not prepared to do so, they should refer them to such primary schools or medical men as will give them proper instruction.

2. The number of professorships should not be less than seven, viz; a professor of anatomy and microscopy, physiology and pathology, chemistry, surgery, practical medicine, obstetrics, and materia medica.

3. There should be but one term annually, which should commence about the 1st of October and close with the March following, thus lengthening the term to six months. The commencement of the term, in October, should be uniform in all the colleges throughout the country. During the session there should never be more than four lectures given daily.

4. The qualifications for graduation, in addition to those now required by the schools, should be a liberal primary education, and attendance upon a course of clinical instruction in a regularly organised hospital.

In order to give our medical colleges an opportunity to consider the recommendations here advanced, and that this body may have the advantage of their wisdom and their mature views, before any definite action is taken upon them, your committee submit to the association the following resolutions:—

Resolved. That the several medical colleges of the United States be requested to send delegates to a convention to be held at on the day of for the purpose of devising a uniform system of medical education.

"That the present report of the special Committee on Medical Education be referred to such convention for its consideration.

"That said convention of delegates from the several colleges of the United States be requested to submit to the meeting of this Association, in May 1859, the result of their deliberations."

On motion, the report was accepted and referred to the Committee on Publication, the accompanying resolutions being laid on the table. The resolutions were subsequently taken up for consideration; and, after considerable discussion, it was, on motion of Dr. Hamilton, of New York, resolved to refer the resolutions to a committee, consisting of one member from each delegation representing a medical college, these members to be named by the college delegates present, and to report on Thursday morning, at ten o'clock.

At the time appointed, Dr. Hamilton, from the Committee of Delegates, to whom was referred the report, reported the following preamble and resolution:—

"Fully appreciating the value and importance of the resolution under which they were appointed, but a majority of the gentlemen constituting this committee, not being authorised by the medical faculties of the several colleges with which we are connected to act as their representatives in this matter, and, therefore, regarding it quite impossible to secure a convention of delegates in the interim of the meetings of the Association: therefore—

"That we recommend to all the medical colleges entitled to a representation in this body, that they appoint delegates, especially instructed to represent them in a meeting to be held at Louisville on Monday, the day immediately preceding the convention of the American Medical Association for the year 1859, at 10 o'clock, at such place as the Committee of Arrangements shall designate."

COMMITTEES.

Standing Committees were appointed on the following subjects, to report next year: Publication; Medical Literature; Prize Essays; Medical Education; Arrangements of the Microscope; Medical Jurisprudence; Quarantine; Surgical Pathology; Diseases and Mortality of Boarding Schools; Surgical Operations for the Relief of Defective Vision; Milk-Sickness; the Blood-Corpuscle; Medical Ethics; the Pons Varolii, Medulla Oblongata, and Spinal Marrow, their Pathology and Therapeutics; American Medical Necrology—the Hygienic Relations of Air, Food, and Water, the Natural and Artificial Causes of their impurity, and the best methods by which they can be made most effectually to contribute to the Public Health; the Effect of the Virus of the Rattlesnake, etc., when introduced into the System of the Mammalia; the Climate of the Pacific Coast, and its Modifying Influences upon Inflammatory Action and Diseases generally; the Constitutional Origin of Local Diseases, and the Local Origin of Constitutional Diseases; Epilepsy; Causes of the Impulse of the Heart, and the Agencies which Influence it in Health and Disease; Best Substitutes for Cinchona and its Preparations in the Treatment of Intermittent Fever, etc.; Government Meteorological Reports; and the Medical Topography and Epidemics of the several States.

[*To be continued.*]

Editor's Letter Box.

THE INTELLECTUAL STATUS OF CORNISHMEN.

Letter from A. T. H. Waters, Esq.

Sir,—My attention has been directed to the following passage in the address of the Chairman, Mr. Kempthorne, at a recent meeting of the Cornwall Branch of the Association, held at Bodmin.

"Those were names" (of distinguished men) "of which they might well be proud, and an evidence that Cornwall was not the miserable ignorant county some persons thought. Such a reflection on their county had been made in a Branch Association—he thought, in Liverpool—but he was sure the list of names he had given them was a sufficient answer to such remarks."

Will you allow me to assure Mr. Kempthorne that no such expression fell from any one, at the recent meeting which took place in this town; and that I am not aware that any member of the Branch, with which I am connected, has ever made a statement of a similar character at any of our gatherings.

I am, etc., A. T. H. Waters,
Hon. Sec. Lancashire and Cheshire Branch.

27, Hope Street, Liverpool, September 15th, 1858.

LIFE ASSURANCE OFFICE FEES.

LETTER FROM ISAAC HARRINSON, ESQ.

SIR,—You will oblige me by noticing, for the benefit of my professional brethren, that the "Promoter Life Assurance Society", 9, Chatham Place, New Bridge Street, Blackfriars, does *not* pay a fee to the private medical attendant of any applicant for assurance. I am, etc.,

I. HARRINSON, F.R.C.S.

Reading, September 20th, 1858.

ELECTRICITY VERSUS CHLOROFORM.

LETTER FROM W. HOOPER, ESQ.

SIR,—Although I was the first to make, take, and administer chloroform this side the Tweed, I am by no means sorry to find that it is likely to be superseded, for allaying pain in dentistry and other minor operations, by electricity, which promises great results without danger.

I have constructed an apparatus, inexpensive and self-acting, for its proper application. The importance of having an apparatus self-acting must be evident to all, so that the hands of the operator may be free to act, and the operation performed without the necessity of a third party. A few pence per week will keep the battery charged; and the apparatus complete I can supply for fifty shillings.

I am, etc., WILLIAM HOOPER, *Operative Chemist.*

7, Pall Mall East, September 13th, 1858.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

BOXALL. On September 15th, at Wisborough Green, Sussex, the wife of *Henry Boxall, Esq., Surgeon, of a son.

BURNS. On September 15th, at Brompton, near Chatham, the wife of *J. J. D. Burns, M.D., R.N., Medical Officer to the Chatham Convict Prison, of a son, prematurely.

CROFT. On September 16th, at Laurence Pountney Hill, the wife of C. Ilderton Croft, Esq., Surgeon, of a son.

DAY. On September 12th, at Newmarket, the wife of Wm. Henry Day, M.D., prematurely, of a daughter, stillborn.

ENGLISH. On September 18th, at Ufford Hall, Northamptonshire, the wife of *Arthur William English, Esq., Surgeon, of a son.

FRAMPTON. On September 18th, at 28, Lower Belgrave Street, the wife of D. N. Frampton, Esq., Surgeon, of a daughter.

GOOLD. On September 17th, at Brighton, the wife of Francis Goold, Esq., Bengal Medical Service, of a daughter.

GUY. On September 16th, at Corby, Lincolnshire, the wife of William Guy, M.D., of a daughter.

HALL. On September 16th, at 30, Old Steyne, Brighton, the wife of *Alfred Hall, M.D., of a son.

LOCHÉE. On September 14th, at Canterbury, the wife of Alfred Lochée, M.D., of a son.

LOWDELL. On September 19th, at Park Road, Stockwell, the wife of J. L. Lowdell, Esq., Surgeon, of a son.

NAIRNE. On September 16th, at 44, Charles Street, Berkeley Square, the wife of Robert Nairne, M.D., of a daughter.

SMITH. On September 19th, at 7, Upper Grosvenor Street, the wife of *W. Tyler Smith, M.D., of a son.

WILLIAMS. On August 1st, at Cuddapah, the wife of J. L. Williams, Esq., Surgeon Native Infantry, of a son.

MARRIAGES.

BAKER—POCKELS. Baker, William Adolphus, Esq., Bombay Engineers, to Jeannie Lisette Henriette, daughter of the late U. Pockels, M.D., Physician to the Duke of Brunswick, at Kurrachee, on August 5th.

BURTON—BUSHMAN. Burton, Edward John, M.D., Staff-Surgeon 1st Class, Cavalry Depôt, Canterbury, to Betsy Wheeler, second daughter of Captain George Bushman, 2nd Dragoon Guards, at Harbledown Church, Kent, on September 15th.

DOWLING—WHITE. Dowling, James H., M.D., of Cerne Abbas, Dorset, to Mary Anne, daughter of the late James White, Esq., of Skilgate, Somerset, at Twerton, on Sept. 13th.

FOX—KING. Fox, Francis Frederick, Esq., second son of *Francis Ker Fox, M.D., of Brislington, near Bristol, to Alice Mary, eldest daughter of Richard Poole King, Esq., of Kensington House, near Bristol, at Brislington, on September 16th.

LEE—HARRISON. Lee, Benjamin, Esq., to Elizabeth Maria, eldest daughter of the late *William R. Harrison, Esq., of Vauxhall, at St. George's, Camberwell, on September 6th.

MASON—HALL. *Mason, Frederick, Esq., Surgeon, of Bath, to Mary Anne, widow of Thomas P. Hall, Esq., at St. James's Church, Piccadilly, on September 16th.

MORRIS—HAYES. Morris, Matthew, Esq., Surgeon, of River Terrace North, to Harriet Ellen, daughter of the late Rev. James Hayes, vicar of Wybunbury, Cheshire, at St. George's, Hanover Square, on September 2nd.

SIORDET—KENT. Siordet, James Lewis, M.B., to Fanny, youngest daughter of Edmund Kent, Esq., of Bacon's Hall, Fakenham, on September 8th.

TAYLOR—LISLE. Taylor, William, M.D., of Cardiff, to Sarah Ann, youngest daughter of Morgan Alexander Lisle, Esq., of Woodfield House, Cardiff, on September 16th.

TIBBITS—BIRD. Tibbits, John, M.D., of Warwick, to Jane, daughter of George Bird, Esq., of the Edgeware Road, at St. Mary's, Bryanstone Square, on September 14th.

WEEDON—MILES. Weedon, William, Esq., solicitor, Reading, to Elizabeth, second surviving daughter of John Miles, M.D., Charterhouse, on September 13th.

WITTEN—ALSTON. Witten, Edward Walter, Esq., Surgeon, of Clerkenwell, to Emma Jane, second daughter of the late Thomas Rowland Alston, Esq., of Crosby Square, at St. Helen's, Bishopsgate, on September 16th.

DEATHS.

BROWN. On September 6th, at Edinburgh, Louisa Ann Crommelin, wife of J. Campbell Brown, C.B., Superintending Surgeon to the Field Army in India.

BROWNE. On September 11th, Matilda, wife of J. Collis Browne, M.D., late of the Army Medical Staff.

BUCHANAN. On May 31st, at Auckland, New Zealand, Agnes, second daughter of Andrew Buchanan, M.D., aged 21.

DAY. On September 12th, Emma Clementina, wife of W. H. Day, M.D., of Newmarket, aged 27.

HARGRAVES. On September 9th, at Brighton, Ann, widow of John Hargraves, Esq., Surgeon, aged 97.

HUGHES. On September 12th, at 6, Fulham Place, Maida Hill, George Fenner, eldest son of the late R. A. J. Hughes, Esq., Surgeon Bombay Army, aged 17.

MORISON. On September 15, at Aberdour House, Banffshire, Annie Grant, wife of Alexander Morison, M.D., of Garbity, Morayshire, aged 64.

PARKER. On September 17th, at Kirkdale, near Liverpool, Nathaniel, infant son of *Edward Parker, Esq., Surgeon.

APPOINTMENTS.

LITTLEWOOD, Joseph, Esq., elected Resident Surgeon to the General Hospital, near Nottingham.

PASS LISTS.

APOTHECARIES' HALL. Members admitted on Thursday, September 2nd, 1858 :—

DEARDEN, John, Accrington
MACKENZIE, Morell
MORRIS, George Selwyn, Guisborough, Yorkshire
WILKES, Edwin, Salisbury, Wilts

In addition, one gentlemen passed his first examination.

Thursday, September 9th :—

JEAFFRESON, John Blackett, Islington

In addition, three gentlemen passed their first examination.

Thursday, September 16th :—

ASHLEY, John, Bristol
DAVIES, John, Festiniog, Merionethshire
HEWLETT, Thomas, Army
HOLLINGS, Robert, Yorkshire

HEALTH OF LONDON:—WEEK ENDING SEPTEMBER 18TH, 1858.

[From the Registrar-General's Report.]

THE mortality of London is now lower than it was in the months of July and August, when the deaths ranged above 1100 weekly. In the week ending last Saturday (September 18th), the deaths declined to 1046, of which 555 were deaths

of males and 491 those of females. In the ten years 1848-57, the average number of deaths in the weeks corresponding with last week was 1351; but as the deaths now returned occurred in an increased population, the average to admit of comparison should be raised proportionally to the increase, a correction which will make it 1486. The above average, however, is derived in part from the extraordinary mortality of two cholera epidemics; and by excluding such exceptional periods from the comparison, it will be found that the present mortality differs not widely from the average in the middle of September.

If the deaths of last week had been according to the rate which prevails in the healthiest districts of England, they would have been 799; the excess above this number which the return shows is 247, and forms what may be called the "unnatural" part of the mortality.

Diarrhœa shows a further decrease; the deaths from this complaint in the last four weeks have been successively 146, 120, 69, and 53. But scarlatina is increasingly fatal, and the deaths from it last week were 118, of which 30 occurred in the east and 44 in the south districts. Four fatal cases of this disease are recorded in each of the following sub-districts:—Christchurch (Marylebone), Islington East, St. George (Bloomsbury), the Green (Bethnal Green), Poplar, Trinity (Newington), and Clapham; and five in St. Peter (Walworth). Three children in one family died on the 12th and 13th inst. of scarlatina, at 19, Theobald Street, in the sub-district of Trinity, Newington. Four deaths are referred to cholera, all of them, with one exception, amongst infants. Eight infants and one adult died from syphilitic disease. Only two persons, both of whom were widows, attained the age of 90 years.

Last week the births of 829 boys and 812 girls, in all 1641 children, were registered in London. In the ten corresponding weeks of the years 1848-57, the average number, corrected for increase of population, was 1472.

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·917 in. On three days the mean reading was above 30 in. The highest barometrical reading was 30·06 in. The mean temperature of the week was 63·4°, which is 6·6° above the average of the same week in 43 years (as determined by Mr. Glaisher). The mean daily temperature was above the average throughout the week, and the excess on the first three days was 8°. The thermometers in the sun and the shade attained their highest points on Sunday (the 12th inst.), which were respectively 105° and 83·8°; the lowest point was attained on the same day, and was 48·7°; the entire range of the day and the week was therefore 35·1° (in the shade). The mean daily range was 25·3°. The difference between the mean dew-point temperature and air temperature was 7·8°. The mean degree of humidity of the air was 74. The mean temperature of the water of the Thames was 63·7°. On Monday and three following days the wind blew from the north-east. The rain-fall of the week was 0·13 in. There was heavy rain on Friday night, accompanied by frequent lightning.

THE REGISTRAR-GENERAL'S METEOROLOGICAL RETURNS.

The following correspondence has been forwarded to us for publication:—

I. *The Staff of Meteorological Observers to the Registrar-General.*

August 25th, 1858.

Sir,—We regret to learn from your circular of the 31st ultimo, that owing to a treasury minute relating to the printing of departmental reports and papers, you are deprived of the pleasure of continuing to circulate, as heretofore, copies of your Annual, Quarterly, and Weekly Reports. We beg most respectfully to submit to your notice the following facts, namely: that for some years we have cheerfully contributed meteorological observations, which, under the able supervision and arrangement of Mr. Glaisher, have appeared in your quarterly returns and annual reports. These observations have been taken by means of expensive instruments, and the correctness and value of the observations have been considerably enhanced by the comparison of most of the instruments in use with standard instruments by Mr. Glaisher. The labour required to take and to record the daily observations, and to work out the monthly results, is considerable; and so considerable, that for this purpose many of the observers are compelled to employ trustworthy assistants. In fact, some of us have incurred an annual expenditure varying from £10 to £20, solely in the preparation of the meteorological sheets for the quarterly returns. Under these circumstances, we venture to think that the contributors to the meteorological part of your reports have well earned the copies which have hitherto been gratuitously forwarded to them; and, moreover, that the Lords Commissioners of Her Majesty's treasury had no intention of depriving them of those reports in the future. We attach a special value to the several reports which are issued from your office, inasmuch as in them we see, from time to time, the practical application of meteorological science to the progress of sickness and mortality. We shall, therefore, esteem it a favour if you will give such an explanation of our position to the Lords Commissioners as will induce their lordships to rescind the treasury minute in our favour, as far as the reports from your office are concerned.

We have the honour to be, Sir, your faithful servants,
Walter G. Barker, Worthing; T. Herbert Barker, M.D., Bedford; C. Barham, Truro; Benjamin Barrow, Ryde; Thos. Bewick, Allenheads; Wm. Brooke, Norwich Priory; George F. Burder, M.D., Clifton; John Carter, St. John's Wood; John R. Chanter, Barnstaple; Samuel Clark, M.A., Battersea; R. Barrington Cooke, B.A., F.L.S., Scarborough; John Dawson, Bywell; Henry Denny, Leeds; W. H. Ellis, Exeter; Bernard Fitzpatrick, Paddington; John Ford, York; William J. Gant, Hastings; John C. Haile, Whitehall; John Hartnup, Liverpool; William Haywood, Guildhall; J. M. Heath, M.A., Enfield; Samuel Horton, Hartwell; S. Elliott Hoskins, M.D., F.R.S., Guernsey; William Ingram, Belvoir Castle; J. W. Jeans, Grantham; William Johnson, Bicester; Wm. Charles Lake, Teignmouth; John Lee, LL.D., F.R.S., Hartwell House; E. J. Lowe, Highfield House, Nottingham; Charles Lowndes, M.A., Hartwell Rectory; George A. Martin, M.D., Ventnor; John B. McLaren, Cardington; J. Matthews, M.A., Lampeter; W. R. Milner, Wakefield; T. Moffat, M.D., Hawarden; M. P. Moyle, Helston; James Rock, Fairlight; Samuel Shellabear, Holkham; John Slatter, M.A., Rose Hill, Oxford; J. E. Smith, Hereford; Thomas Sopwith, M.A., F.R.S., Allenheads; Robert Spence, North Shields; Wm. Squire, Great Berkhampstead; Robert S. Stedman, Sharnbrook; Henry Storks Eaton, B.A., Little Bridy; R. D. Thomson, M.D., F.R.S., London; G. V. Vernon, Manchester; Edward Vivian, Torquay; Saml. Chas. Whitbread, F.R.S., Cardington, near Bedford; W. W. Williams, M.D., Gloucester; Hale Wortham, Royston.

II. *The Registrar-General to Dr. Herbert Barker.*

General Register Office, Somerset House, 28th August, 1858.

Sir,—I regret that I am under the necessity of informing the gentlemen whose meteorological observations I publish in my quarterly returns, that the Lords of the Treasury decline to sanction their being supplied gratuitously with my reports.

Their lordships will not make an exception with regard to this office, but are determined to make strenuous efforts to reduce the annually increasing expense occasioned by the lavish gratuitous distribution of government publications; and the same rule which is complained of in your letter to me of the 25th inst., will be rigidly enforced in future, not only in my department, but in all the offices which issue printed periodical reports—the General Post-office—the Inland Revenue office—the Custom House—the Committee of Privy Council on Education—the department of Board of Trade connected with fine arts—the Civil Service Commission—the Factory Inspectors—the Mining Inspectors—the Prison Inspectors, etc., etc.

One shilling and fourpence being the entire annual expense to be incurred in purchasing my four Quarterly Returns in which the meteorological observations are published, the Lords of the Treasury hope that the expenditure of that small sum in each year will not deter the observers from continuing their useful labours, when they are made acquainted that their being deprived of the receipt of these publications gratis is only part of an extensive system by which their lordships hope to effect a very considerable saving in the public expenditure.

I have the honour to be, Sir, your faithful servant,
George Graham, *Registrar-General.*

Dr. Barker, M.D., Bedford.

III. *The Staff of Meteorological Observers to the Registrar-General.*

September 7th, 1858.

Sir,—We, the undersigned, have the honour to receive your note of the 28th ultimo, containing intimation that you are unable to perform the simple request made by us in reference

to the supply of your returns and reports. Under these circumstances we have thought it proper to memorialise the Lords Commissioners of Her Majesty's treasury on the subject in question, and to lay respectfully before their lordships, as we have had the honour to lay before yourself, the reasons which lead us to think that we are, as heretofore, deserving of the published papers of your office.

We cannot for one moment conceive that the supply of your reports to those who have been at so much labour and expense to contribute to them, can correctly be classed under the lavish distribution referred to in your letter. It is true that fourpence per quarter is but a small outlay for your quarterly returns, but we feel assured that, after the time and expense which we have gratuitously sacrificed towards the completion of those reports, we ought not to be called upon to purchase them at any price, however small. At the same time it is equally true that the outlay by government of fourpence per quarter upon each contributor, would be anything but a lavish expenditure of public money.

Our labours as meteorologists have been supplied to you ungrudgingly. We have endeavoured to contribute them for the purpose of supplying a scientific want; we cannot but humbly believe that labours so accumulative and coincident must be of ultimate value to science, and it would be painful to us all to suspend our exertions. Should, however, our appeal to the Lord Commissioners be refused, we feel that we cannot, in justice to ourselves, make laborious and expensive contributions to any state paper which is afterwards withheld from us—unless subscribed for.

We have the honour to be, Sir, your faithful servants, etc.

IV. *Memorial to the Lords Commissioners of Her Majesty's Treasury.*

We, the undersigned, respectfully approach your lordships on the subject of the withdrawal of the Reports of the Registrar-General of Births and Deaths, hitherto supplied to us and others gratuitously for scientific and useful purposes. The registrar-general has intimated to us that by a treasury minute of 31st May last, he is prevented from sending us the reports any longer. We memoralise your lordships for a continuance of the privilege heretofore conceded, on the following grounds:

1. We have all us, for many years past, been gratuitous contributors to the registrar-general, by sending him the facts out of which his meteorological returns have been regularly drawn up under the able superintendence of Mr. Glaisher.

2. Our observations thus contributed have been taken by means of expensive instruments, and the value and correctness of the observations have been enhanced by the fact that our instruments have been compared with standard instruments, and our observations constructed on one uniform system, under the direction of Mr. Glaisher.

3. Our observations have been taken at arranged times daily, and by a common system, so as to ensure uniformity of results.

4. The labour of taking and recording these observations have necessitated, in many cases, an expenditure varying from £10 to £20 annually for procuring qualified assistants; while the cost to each of us, of time and attention, has been very considerable.

Under these circumstances we feel strongly that we are at least deserving of copies of papers to which we have ourselves contributed so willingly; and the more so, because the papers in question are not only interesting to us but useful, as enabling us to carry out scientific studies and observations, the sole object of which is for the good of the community.

We therefore pray your lordships earnestly that at least an exception may be made in our favour, in regard to the distribution of the registrar-general's papers; and would further humbly pray that your lordships should reconsider the question of the propriety of withdrawing documents so eminently useful from men of science generally, who require them for the advancement of sanitary and social science.

And your memorialists, as in duty bound, will ever pray.

(*Signed.*)

[The latter two documents are being circulated among the observers for their approval of signatures.]

THE NEW MEDICAL ACT. We learn that arrangements are in progress for the purpose of forming an association to consider the various clauses of the new Medical Act, and to take such steps as may be considered necessary to protect the interests of the profession. We trust that the proceedings of the association will be conducted with judgment, and that its labours will be attended with benefit.

TO CORRESPONDENTS.

POSTAGE OF MANUSCRIPT AND PRINTED MATTER.

Any amount of manuscript or printed matter, singly or together, provided it contains nothing in the form of a written letter, is transmitted through the post, in packets *open at the ends*, at the following rates: not exceeding 4 ounces, one penny; above 4 and not exceeding 8 ounces, twopence; above 8 ounces and not exceeding 1 pound, fourpence; for every additional half-pound or under, twopence.

NOTICE.—DR. WYNTER will feel obliged if the Associates will address all Post Office Orders in payment of Subscriptions, to the Publisher, Mr. THOMAS JOHN HONEYMAN, 37, Great Queen Street, Lincoln's Inn Fields, London, W. C., "Bloomsbury Branch"; and he would also feel obliged by their sending all communications respecting the non-receipt of the Journal, to the same address; as both these matters are out of the province of the Editor.

Members should remember that corrections for the current week's JOURNAL should not arrive later than Wednesday.

ANONYMOUS CORRESPONDENTS should always enclose their names to the Editor; not for publication, but in token of good faith. No attention can be paid to communications not thus authenticated.

Communications have been received from: — MR. JAMES CRAIG; DR. HODGKIN; MR. J. PAGE; MR. TERRY, JUN.: DR. BARKER; DR. WHITEHEAD; DR. MCWILLIAM; MR. A. T. H. WATERS; LE DR. A. FOVILLE; MR. F. MASON: REV. A. EDEN; MR. WHEATCROFT; MR. DULVEY; DR. G. G. ROGERS; DR. WEBB; MR. T. HOLMES; MR. G. M. HUMPHRY; MR. BARTRUM; MR. E. PARKER; THE PRESIDENT AND TREASURER OF ST. THOMAS'S HOSPITAL; MR. HARRINSON; and MR. WESTON

BOOKS RECEIVED.

[* *An Asterisk is prefixed to the names of Members of the Association.*]

1. Etudes sur la Monorchidie et la Cryptorchidie chez l'Homme. Par M. Ernest Godard. Paris: Victor Masson. 1858.
2. Hooper's Physician's Vade Mecum. Sixth Edition, considerably enlarged and improved. By W. A. Guy, M.B. London: Henry Renshaw. 1858.
3. A Clinical Memoir on Strangulated Hernia. By George Macilwain. London: Henry Renshaw. 1858.
4. On the Nature, Causes, Statistics, and Treatment of Erysipelas. By Peter H. Bird, M.D. London: Churchill. 1858.
5. The Ophthalmoscope: its Mode of Application explained and its Value shown, in the Exploration of Internal Diseases affecting the Eye. By Jabez Hogg. London: Churchill. 1858.

ADVERTISEMENTS.

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